THE AGRICULTURAL CRISIS

1920-1923

BY

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WITH DIAGRAMS

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PREFACE.

No attempt has been made in this volume to give a complete account of all aspects of the agricultural crisis, either in this, or in other countries. The theme throughout has been the prices of agricultural products, their cost of production, and the influences which have affected them during the last decade and caused them to rise or fall.

In most writings upon agricultural economics, little attention has been paid to the economic causes which determine agricultural prices, and yet, in the last resort, this must remain the fundamental question of agricultural economics. The war and its consequences have provided an exceptional—in some respects unique—opportunity for the study of the underlying causes of price fluctuations, and to this branch of the subject the following pages are directed.

I am indebted to Mr. H. D. Henderson and to Mr. R. J. Thompson, for very kindly reading the manuscript, and for several useful suggestions. I am also indebted to Mr. B. W. Phillips for his kindness in reading the proofs.

R. R. E.

March, 1924.

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CHAPTER I.

THE CRISIS.

In the autumn of 1920, agricultural prices in this country which until early in that year had been steadily rising for approximately six years, suddenly slumped ; the period of prosperity which had accompanied the upward movement came to an end, and the industry was plunged into a crisis which has few parallels in British agricultural history.

During the whole of 1920 and 1921 the fall in agricultural prices continued practically without interruption, frustrating any attempt the farmer made to reduce his costs of production or otherwise to meet the new situation in which he unexpectedly found himself. Wages at the beginning of 1920 were actually rising, in conformity with the rising cost of living, and not until August, 1921, when agricultural prices had fallen from 202 per cent. to 131 per cent. above the average of 1911-1913, was any substantial reduction in this item of cost brought about. During this period the farmer's situation had been one of increasing difficulty. Relative to the prices he was ultimately to receive for his produce, the cost of production was continually rising. Already farmers were faced with very heavy losses, some even with bankruptcy. The return of arable land to grass, a movement which had actually *preceded* the fall in prices, not unnaturally gathered considerable momentum.

During the whole period from the beginning of the general downward prices movement, to the end of 1921, all agricultural commodities alike suffered a heavy decline. It was not until 1922 that this general movement began to assume a slightly different character. In this year the very rapid downward price movement of certain agricultural products, notably live stock, butter, and cheese, came to an end. But in others, of which the outstanding examples were wheat, barley, and oats, the slump continued its uninterrupted course. Thus in 1922 a difference in the severity with which British agriculture had suffered in the crisis began to be felt between arable farming on the one hand and grass farming on the other. Though all had suffered in an acute degree from the general collapse of 1920 and 1921, the stock farmer had now apparently a more steady market for his produce. To the corn grower, however, the situation presented not even this small measure of comfort. Corn prices continued to fall during 1922 and even in 1923. In the latter year the cumulative effect of three successive bad seasons was reacting disastrously upon arable farming throughout the country, and by the harvest, the position of many arable farmers was little short of desperate.

What was happening during this period in other countries? Was the crisis peculiar to England, was it more severe in England than elsewhere, or did other countries suffer in like manner?

It is first of all necessary in answering this question to distinguish between the group of Central and Eastern European countries whose economic life was almost wholly disorganised by the war, and the remaining countries of the world which had suffered to a relatively smaller degree. Russia, Germany, Austria, and Poland experienced an

economic upheaval so great as very largely to dislocate the normal industrial life of the nations. The printing of paper money in these countries continued after the war, accompanied by steadily rising prices until the respective currency units had fallen in some cases to a mere fraction of their pre-war value, or in others had ceased to be worth anything at all. Added to this, political disturbance aggravated and prolonged the economic distress, so that in all these countries the agricultural population suffered with greater or lesser severity from the general aftermath of disorganisation left by the war. Except in the case of Russia, however, where famine was added to her other troubles, agriculture suffered chiefly as an indirect consequence of the disorganisation of the towns; the crisis so far as it occurred at all was not brought about, as in this country, by a fall in the price of agricultural produce. In fact one or two of the smaller countries where the political or economic crisis was less severe, appear to have escaped altogether anything in the shape of a severe agricultural depression.

What are the facts as regards the remaining countries of the world? It is well known that the slump in prices which occurred in 1920 was not confined to agricultural produce but affected all commodities; it is hardly less well known that other countries sustained a general fall in prices similar to that which occurred in the United Kingdom, but it is perhaps less fully recognised how universal the price debâcle of that year actually was. With the exceptions already mentioned the break in prices was almost world wide. The gradual rise of the general price level from 1914, reaching a peak during 1920, followed by a rapid decline, was the common experience of each of the following countries: the United

Kingdom, France, Sweden, Norway, Denmark, the Netherlands, Spain, Italy, the United States, Canada, India, Egypt, Japan, Dutch Indies, South Africa, Australia, and New Zealand.

In the table given below are shown the dates at which the general fall in prices began, and those at which it came to rest—at any rate temporarily—and the percentage fall in prices which took place between these two points.

	Date when Fall in Prices Began.		Date when Lowest Point was Reached.		Percentage Fall in Prices.
U.S.A. (Bradstreet) .	January,	1920	May,	1921	49·1
British India . .	,,	,,	February	,,	20·2
Egypt . . .	February	,,	July,	1922	63·2
Japan . . .	March	,,	December	,,	43·1
France . . .	April	,,	February	,,	47·9
Dutch Indies . .	,,	,,	September	,,	51·4
United Kingdom (Board of Trade) .	May	,,	,,	,,	52·6
U.S.A. (Bureau of Labour Statistics) .	,,	,,	January	,,	44·1
Canada . . .	,,	,,	October	,,	38·4
Sweden . . .	June	,,	November	,,	56·5
Netherlands . .	July	,,	September	,,	48·5
South Africa . .	,,	,,	July	,,	45·5
Australia . . .	August	,,	March	,,	38·0
Norway . . .	September	,,	December	,,	48·2
Denmark . . .	October	,,	September	,,	56·3
New Zealand . .	,,	,,	December	,,	22·3
Spain . . .	,,	,,	October	,,	24·9
Italy . . .	November	,,	June,	1921	24·1
Czecho Slovakia .	,,	1921	December,	1922	38·2

Except in Czecho Slovakia, where prices continued to rise for some time after the end of the war, the break occurred in every case within a period of twelve months, and in the principal countries within a period of seven months. The period covered by the descent to the lowest point was,

however, in some cases short, and in others much more protracted. In the United States, for example, it lasted approximately eighteen months, while in the United Kingdom it covered twenty-nine months. But the outstanding fact is that 1920 saw a collapse of prices throughout the greater part of the civilised world. It began in the far East and swept like an avalanche through the United States, England, Europe, and the Colonies. The British agriculturist, unaware of what was happening, was caught in the onward rush, and like other traders soon saw his profits converted into disastrous losses, and his high hopes of the future into disappointment.

The agricultural crisis which followed was not an episode confined to this or a few other countries, but was experienced in a greater or less degree in all the countries which were subject to this price movement. In the United States the crisis, and consequent distress amongst farmers in 1920 and 1921 was, if anything, more severe than in this country, as may be judged by the degree to which agricultural prices fell in each respectively. During the first eighteen months of their downward movement, that is to say, from January, 1920, to June, 1921, the prices of farm produce in America fell by 54 per cent. In the first eighteen months of the corresponding movement in the United Kingdom, namely, from April, 1920, to September, 1921, the fall in price was 31 per cent. In Canada, Australia, and New Zealand falling prices, diminished profits, or unusually serious losses were in like manner the common experience of farmers in these countries. In short, the profound disturbance caused by the World War to the economic conditions governing the production, supply,

and prices of commodities, left a state of affairs in which the readjustment from war conditions to peace conditions produced an almost universal depression.

The downward price movement succeeded an upward movement which had covered the whole period from the outbreak of war. The upward movement, however, was spread over a longer period than the downward. Moreover, the process of converting Great Britain from a peaceful industrial country to one organised for war, did not take place all at once, but gradually, as the size of the fighting forces, their needs, and the character of the war developed. The continual attrition of supplies, the shortage of labour, the shortage of means of transport and ultimately the need for rationing, were all elements of added difficulty in this process. A rise in the cost of production of agricultural produce and other commodities accompanied the rise in prices during this period, but the former was less than the latter, so that on the whole the period was, from the purely financial point of view, one of increasing prosperity to the British farmer.

What was true of agriculture was true of other industries. Indeed this prosperity was the general character of the war period. Profits increased all round, the share market was buoyant, and the general "tone" of business, had it been a time of peace, would certainly have been described as optimistic. This process continued practically without interruption until the Armistice. Profits in trade continued to rise, "excess" profits became the general rule, so much so that the Government eventually stepped in with a special measure of taxation from which a very considerable revenue was ultimately derived. New plant came into existence to supply the

ever-growing demands of the Government, wages rose, and unemployment ceased to exist. Many manufacturers, speculating upon the good markets they expected to obtain when the war was over, were ready enough to lay out capital to meet the temporary demands created by the vast needs of the Army and Navy.

Such were the conditions at the time of the Armistice. With the end of the war, the needs of the fighting forces began to diminish. Moreover, the shipping which had been largely requisitioned for the transport of war materials—the shortage of which had been one of the most serious industrial handicaps in this country—was soon released, and thus once more became available for the transport of large quantities of raw materials and foodstuffs from abroad. Nevertheless, prices did not fall. There was a short lull during which industry was "decontrolled" and the first steps in turning back to peaceful occupations took place. But in the year following, the upward price movement continued with even added acceleration.

In more ways than one, 1919 was a remarkable year. Optimism, which had been the prevailing mood throughout British industry, now rose to the point of ecstasy. The war being over, Government control, which to many had seemed so obnoxious, having gone, everybody was busy and hopeful. So far from there being a depression, as some gloomy prophets had foretold, everything pointed in the reverse direction. Prices were rising with every prospect of further rise, the unemployment brought about as the Army was disbanded, was rapidly disappearing, everybody was elated, everybody looked for big profits. The business world with its usual reckless

confidence now plunged into an orgy of speculation. Stock exchange prices rose, huge deals in cotton and other speculative shares were of nearly daily occurrence. The capitalisation of reserves and similar means of concealing largely increased dividends became almost the established procedure amongst industrial companies, looking forward as they were to still greater profits in the future.[1]

One illustration is enough to show the spirit of speculation which possessed the country. From a period of moderate activity in 1918, the cotton industry passed into one of great prosperity in 1919. The opening up of foreign markets which had been partially or wholly closed during the war, brought a great volume of new orders to Lancashire. By the middle of that year, the attention of speculators and company promoters had been drawn to the cotton spinning industry, and a feverish buying up of the spinning companies set in and continued until the spring of 1920. During this period not only was no real capital added to the industry, but the difficulty of replacement and repairs during the war had caused a serious deterioration, and the volume of output was only two-thirds of the 1913 level. Nevertheless, during 1919 and the first part of 1920 over 42 per cent. of the spindles in the industry were bought up by speculators who are stated to have paid for them on the average *six times* their 1913 value. Moreover, new companies were formed by the new owners, with roughly three times the share capital of the old

[1] For a description of the very similar state of affairs in the United States at this time, see the "Report of the Joint Commission of Agricultural Enquiry," House of Representatives Report, no. 408, vol. ii. p. 42.

companies. Particulars of 238 mills with 23,832,000 spindles, are shown in the following figures[1]:—

Total former capital . . .	£10,815,000
Total sale price in the boom . .	£71,875,000
Total new capitalisation (paid up) .	£33,777,000

Even when companies did not change hands, in many cases their share capital was substantially increased. Thus was the industry saddled with an immense incubus of unreal capital, with which it had to face the slump of 1920.

All this unhealthy and reckless boom had, as we shall see, an effect on the sharp rise in prices which accompanied it, ultimately increasing the hardships and losses, alike to agriculture and other industries, in the depression which immediately succeeded it. In other branches of industry—notably the iron and steel, and the coal trades—the same story is recorded; the boom continued; the race for speculative investment was pursued, unabating, throughout the year. As for the British farmer, though it is true he did not go about beating his drum with quite the abandon of the rest of the business community, he was, it must be admitted, doing very well out of the general buoyancy of prices and the relatively low cost of production, and for one brief space he found himself, perhaps to his surprise, with very little to complain about. But it was not to last.

Like a blizzard, the break in prices swept over the industrial world. From country to country it spread with alarming rapidity, blighting new enterprises, destroying confidence, and creating incalculable difficulties between debtors and creditors. Optimism speedily disappeared,

[1] See "The Worker's Register of Labour and Capital," London: The Labour Publishing Co. Ltd., 1923.

calculations went wrong, orders fell off, unemployment began to increase, and the whole process of the previous years was inverted. The drop in prices continued with relentless insistence. The perplexity of those who had made their plans on the assumption of a prolonged period of prosperity and big profits, was increased a hundredfold. Bankruptcies began to occur, stock exchange prices fell and—in short—the evidence became overwhelming that the country was in for a prolonged period of industrial depression.

In 1919 the Governments of those countries which still remained in a relatively sound financial position had yielded to the general demand and had retired, or were retiring, from the part they had played during the war in the direction of industry. It was a period of decontrol. But the mind and temper of business men seem to react very differently to political or economic questions, according to whether the general movement of prices is upwards or downwards. "Away with Government interference," was the cry when prices were rising, "let us have the free play of economic forces." But when the price movement was in the opposite direction and conditions had altered, people were apt to exclaim—"But for the idleness or impotence of Government, we should not have been left in the lurch, to the merciless play of free economic forces, threatening us with ruin and bankruptcy." The great principle of the free play of economic forces, advocated with such insistence during 1918 and 1919, in the following year suddenly lost all its charm. Its strongest adherents became sceptical as the inexorable grip of economic conditions tightened its hold on the industrial life of the country. The belief that industry, once unbound and disencumbered from the shackles of State Control,

would set out on a career of continuous prosperity, soon proved to be unfounded, and the new order was found to be as unwelcome as the old. This great illusion thus ended in disillusion, and finally when the economic debâcle of 1920 and 1921 had become a recognised fact, disappeared along with many another mistaken idea.

Agricultural opinion did not escape the same remarkable metamorphosis. With the turning tide of 1920, farmers and business men alike saw serious losses confronting them, and alike they turned to their Governments with demands for all manner of improvised remedies to save them from worse disasters to come. The Canadian wheat growers who had been loudest in denouncing the Government control of wheat were the first to demand the resuscitation of the Canada Wheat Board. The Australian farmers demanded and obtained a guaranteed price for cotton, a State controlled "pool" for canned fruit for export, and a subsidy on exported meat; the New Zealand fruit grower, a State guaranteed profit on exported fruit; the South African stock farmer, a subsidy on meat. In America a proposal for the revival of the United States Grain Corporation soon found its advocates, and the idea was pressed in many quarters during the succeeding two years. In a short space of time State interference was once more earnestly advocated as the only means of rescue from the threatened economic chaos, and in most countries which suffered in the crisis, agriculturists again sought from their Governments protection, or at any rate, a "programme."

In all these countries the form in which the crisis actually confronted the practical farmer was a very simple one. When he came to sell his produce he found that

the best price he could realise was far below his expectations, and very frequently below the cost of production. The bottom had gone out of the market. At first he was often ready enough to take the course of events philosophically, to treat 1920 as a bad season, and to hope for improvement in the months to come. He endeavoured to meet the future with such reasonable steps as he could take to economise expenditure and to reduce his costs for the ensuing crops. But when in the following year the same conditions repeated themselves, when he was once more confronted with a market price which did not repay the cost of production and his efforts at economising had proved to be vain, he began to realise that he was in the grip of events which had no parallel in his experience and which were beyond his powers of control. Prices in this country continued to drop, the cost of living continued to remain relatively high. Wages —one of the principal costs in the production of farm products—although falling after August, 1921, remained high in relation to the prices of produce on the market, and the farmer was still faced with the same insoluble problem of how to make both ends meet. Not unreasonably, therefore, did he turn to the Government for protection, if not for succour.

But it was of little avail. The agricultural depression had its causes deeper within the structure of the whole economic system than he ever suspected, deeper perhaps than was suspected by many who wished to see agriculture established on a more prosperous footing, and the improvised measures for the assistance of farmers introduced at the eleventh hour could do little to alleviate its effect, and nothing to remove its cause. The farmer's fate was bound up with that of industrial-

ists throughout the civilised countries. In the background of the visible economic system, things were happening, influences were operating which profoundly affected the industrial life of the entire world. The unseen movement of money values, leaving the farmer, like the business man and manufacturer, at one time prosperous, successful, and apparently secure, at another, disappointed, struggling, in debt, or facing bankruptcy, played a part in the economic history of the nine years following the outbreak of war, of such overwhelming importance as to give to all other factors, at most, only minor importance. And of these things at least, the farmer had no conception whatever.

The habit of thinking in water-tight compartments is responsible for many serious mistakes, and the divorce between theoretical economics and the industries about which it theorises is not the least example of this habit. The laws of economics affect every industry, as the laws of hygiene every individual. To detach the agricultural crisis and treat it as an independent episode in the history of the last decade, as has sometimes been done, is therefore not only to treat it inadequately but to be entirely misleading. The period of rising prosperity during the war, the sudden turn of fortune some eighteen months to two years after the war ended, the critical years of depression which have followed, have been a common experience in almost all industries and in many countries.

Why these things happened at all, what their effect upon agriculture was, and how they may be prevented or at least mitigated in the future, is the subject of the following pages.

CHAPTER II.

THE CAUSE.

It must be remembered that during 1919 the general level of agricultural prices was, like the prices of other commodities, rising; trade was brisk, and the prevailing mood of business was still optimistic. The peak in agricultural prices as measured by the Ministry of Agriculture index number was reached in April, 1920 they fell in May and June, rising again in July and August, until the same point was again reached in September. Then began the downward descent which continued practically without intermission through the remainder of 1920 and the whole of 1921 and 1922. What was the cause of this change and continued fall? Was it a flooding of the market with imports from abroad? Was it increased production of food in this country? Was it a fall in demand by the home consumer or had it other causes? [1]

[1] Throughout the pages which follow, use is very largely made of what are known as "index numbers" of prices, that is to say numbers representing the percentage increase or decrease of the prices of the commodities to which they refer, as compared with the prices during a standard period—usually, in this book, the average of 1911-1913. A note of warning should, however, be given as to these figures. Index numbers such as those of wholesale commodity prices are not absolute measures of the rise and fall of prices, but are necessarily only approximations. They are built up from figures representing the prices of a *limited* number of commodities; the choice of these commodities is necessarily

A very superficial examination of the circumstances relating to the movement of agricultural prices during these critical years is sufficient to show the complexity of the problem. So numerous, so diverse, and so inextricably interwoven are the economic forces bearing upon the prices of commodities, that any attempt at an analysis of the underlying causes of the crisis must necessarily take us somewhat far afield.

If we therefore find that questions of supply and demand for farm produce in this country cannot alone account for the price movement; if we are inevitably led into a discussion of the monetary events which took place in this country during the period in question, and from this to an examination of the monetary policy of certain other countries, particularly the United States of America, it is only because these things are inseparable from any inquiry into the causes of the price movement in which agriculture and industry alike were involved. Monetary questions may seem to be far removed from agriculture; but the plain fact is that the root causes of the agricultural crisis *were* far removed from agriculture.

If asked why the prices of agricultural produce rose during the war, most people would probably have replied "because these commodities were becoming scarce." But was this the only reason? If not, was it even the chief reason? For the purpose of giving a full answer to these questions it would be necessary to examine the movement, not only of the general index of agricultural prices (which is a composite figure made up of the price

arbitrary, and differs between one system of index figures and another. Moreover, the technical difficulties of compiling them have been greatly increased during the war, on account of certain markets having been closed, and other causes.

indices of a number of agricultural products), but of the price index of each commodity separately and compare it with the fluctuations in supply, so far as there are statistical records available. To attempt such an analysis is beyond the scope of this chapter. Moreover, the prices of many agricultural products depend on world's prices and consequently upon world's supplies. An analysis of the conditions of demand and supply in respect of such articles would, therefore, involve an inquiry into the conditions in other countries.

That there was a growing scarcity during the war is beyond dispute, and that this scarcity affected agricultural prices, is no less free from doubt. The case of wheat may be taken as an example of a commodity the price of which depends primarily on world's supplies. In Table I. of the Appendix it is shown that the average price of British wheat in 1916 had risen 79 per cent. and in 1917, 132 per cent. above the average of 1911-13. Now the outstanding event in regard to the world's wheat supplies during this period was the cessation of exports from Russia and the Danubian countries, an event which undoubtedly created a shortage during the first years of the war, and brought the consuming countries into competition with one another for the available world's supplies. It was a shortage, however, which was rapidly replaced as the war proceeded by supplies from the new wheat areas brought under cultivation in the other exporting countries of the world. We may conclude, therefore, that the failure of Russian supplies did have the effect of raising the world's wheat prices, and consequently the prices of wheat grown in this country during the first years of the war, but whether this shortage was enough to account for a rise to

79 per cent. above pre-war in 1916, and whether it could have conceivably brought about the rise to 132 per cent. in 1917, is a very different matter.

Turning to the cases of barley and oats, it will be seen that prices rose in 1915 and 1916 in a manner similar to the price of wheat, and in both cases world supplies suffered a diminution on account of the stoppage of Russian and Danubian exports. Barley prices rose to 88 per cent. above pre-war in 1916 and to 128 per cent. in 1917; oats to 68 per cent. in 1916 and to 151 per cent. in the following year. But let us pursue the analysis a little further.

The British requirements of potatoes are almost exclusively met by the home-grown crop; in this case, therefore, the price is not so dependent on world's production, and it is possible to obtain a more accurate estimate of supplies during the years under discussion. The following table shows the total production of potatoes in the United Kingdom in the years 1912-17, expressed in thousands of tons:—

Year.	Total Production.
1912	5,226
1913	7,605
1914	7,476
1915	7,540
1916	5,469
1917	8,604
Average. 1912-21	7,088

What was the course of potato prices during 1914-17? In 1915 they rose to 9 per cent. above pre-war, in 1916 to 88 per cent., and in 1917 to 137 per cent. In other words, they followed much the same course as wheat prices. But there had been no failure of supplies in

this case. On the contrary, supplies on the whole increased. The 1915 crop showed an increase of 64,000 tons over that of 1914; nevertheless, the price rose. In 1916 there was a short crop, and prices again rose, but the crop of 1917 was very abundant, showing an increase of 3,135,000 tons over the previous year and about 1,500,000 over the average of the 10 years, 1912 to 1921. Although prices fell in the latter part of 1917 as was inevitable with such a heavy production, they still remained substantially above normal.

It is unnecessary to pursue the detailed comparison. Each of the commodities shown on Table I. of the Appendix suffered a continuous rise in price during the years under review, notwithstanding the fact that they were produced under widely different conditions, that some were mainly imported, others partly imported and partly produced at home, and others almost wholly grown in this country. In spite, therefore, of the undoubted influence of scarcity on the price movement of these years, this cause alone does not seem fully to account for the character of the price movement which these figures reveal. Some other influence would seem to be responsible, at any rate in some degree, for the close resemblance between the rise in price of these different products.

During the latter years of the war, a comparison of prices with supplies is rendered much more difficult, if not fruitless, by the price fixing operations of the Government. Turning, however, to the post-war period, during which the effect of control, for the few months it lasted, had little or no influence on the slump in prices which then occurred, some further analysis is possible. To take the case of wheat. Was the break in

price in 1920 due to a sudden abundance of American, Colonial, or other foreign wheat, followed by a large increase in imports to this country? Was it due to the release of shipping, which enabled larger quantities to reach the United Kingdom? Or was there some other cause? The index figure for British wheat prices fell from 147 per cent. above pre-war in 1920 to 119 per cent. in 1921, and to 46 per cent. in 1922. Not only was there no increase in imports in 1921 and 1922 such as might have been expected to accompany this rapid fall in price, but the net imports in both these years were substantially less than in 1920.

The fall in price, like the rise, was not confined to wheat, but the price indices of barley and oats also show a decline of similar character, the former falling from 215 per cent. in 1920 to 41 per cent. in 1922, and the latter from 187 per cent. in 1920 to 47 per cent. in 1922.

Turning once more to the case of potatoes, as an example of a home-produced crop, the figures are even more remarkable. The total production of potatoes for the four post-war years, 1919-22, are given in the following table, expressed in thousands of tons:—

Year.	Production.
1919	6,312
1920	6,374
1921	6,554
1922	8,634

In 1920 the potato crop was very slightly larger than in 1919, nevertheless, the index figure of potato prices rose from 135 to 206 per cent. above pre-war. The 1921 crop, on the other hand, was again slightly larger than that of 1920, exceeding the latter by some 180,000

tons, but this time the index figure fell to 132 per cent. above pre-war.[1]

The plain fact is that in 1921 potatoes shared in the general fall in price which was suffered alike by all agricultural produce. When the figures are thus analysed, it is evident that abundance can no more account for the downward price movement, than scarcity in the earlier years could account for the upward movement. Both had their effect, but the disparity between supplies and prices still remains.

Some writers have attached much importance to the effect of the renewal of foreign competition after the war. For example, Mr. Venn, describing this period in his recent volume, "The Foundations of Agricultural Economics,"[2] says: "When the war ceased, agriculture at home was subject to immediate competition from the more distant centres of supply which had been unable to transport their wares to this country from 1914 to 1919. Here again agriculture was at a material disadvantage. . . ." Possibly it was, but what was the effect of this competition on prices? As Mr. Venn says, free foreign competition followed immediately after the war, that is to say in 1919—the precise dates are of some importance. Not only was there no fall in agricultural prices during 1919, but the index figures showed a rise during this year greater than *in any other year since the outbreak of war.*

But the point need not be laboured. The year 1920 was the beginning of a long process of price depreciation,

[1] The great fall in prices in the autumn of 1922 and spring of 1923 was undoubtedly due to the "bumper" crop of 1922 to which further reference will be made.

[2] P. 185.

not only of wheat or potatoes, but of all agricultural produce, and, in fact, of all commodities generally. It is sufficient to say of the analysis of the factors governing the supply of agricultural commodities, whether grain, live stock, vegetables or dairy produce, that we cannot, by these factors alone, account for this rapid and continuous fall in prices. To complete the analysis we must look for other causes. What other causes were there?

If we seek a close relationship, it is at once to be found in the movement of agricultural prices on the one hand and that of general commodity prices on the other hand. In the following tables are given the percentage increase over pre-war of agricultural prices compared with that of general wholesale prices for the years 1914-22.[1]

TABLE I.

Percentage increase in price over the average of 1911-13, *of agricultural produce, compared with wholesale commodities.*

Year.	Agricultural Produce.	Wholesale Commodities.
1914	1	2
1915	27	30
1916	60	63
1917	101	110
1918	132	130
1919	158	147
1920	192	201
1921	119	86
1922	69	57

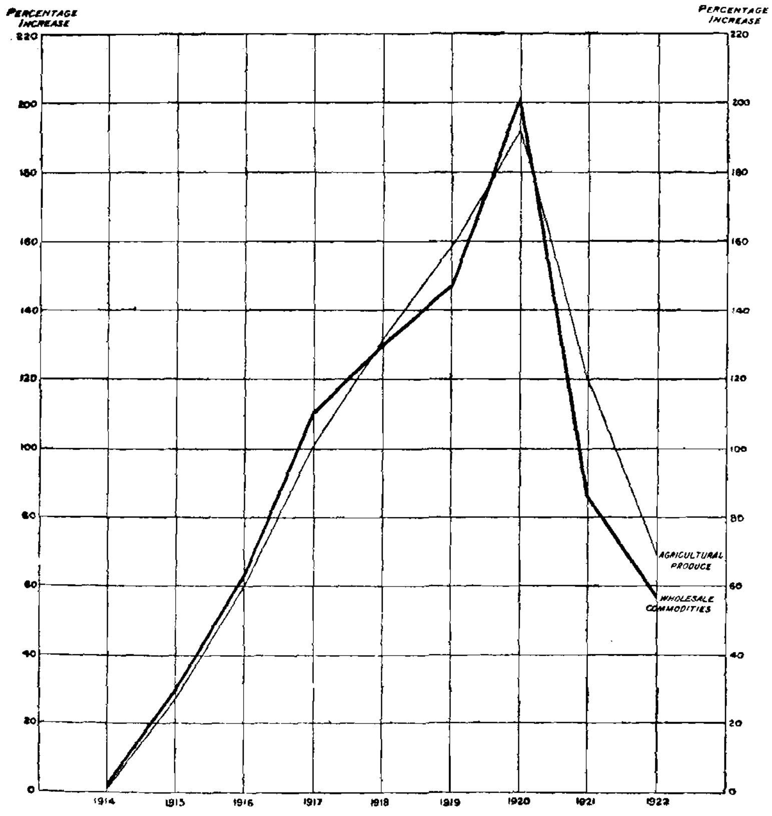
[1] The figures for wholesale commodity prices have been taken from those published by the "Statist" (Sauerbeck's figures), re-calculated on the basis of the average of 1911-13.

These figures are represented graphically in chart I. A glance at this chart is sufficient to show how closely the price movement in agricultural produce has followed that of general commodities, and to suggest that the causes which predominated in the upward and downward movement of the general level of prices in this country between 1914 and 1922 also predominated in the movement of agricultural prices. What are these causes? This is the next question to be answered.

It is not intended to burden the reader with a discussion of monetary theory. Nevertheless, at the risk of seeming to depart too widely from the main theme of these pages, some reference must be made to the economic theories which are usually held to account for fluctuations in the general price level, in order that the significance of what follows may be appreciated.

The price of an article only rises if some one is prepared to pay more for it than he was before; it only falls if its possessor is prepared to take less for it than he was before. A buyer may be prepared to pay more for an article for a variety of reasons. Whatever his motive, however, the essential condition of his being able to pay the higher price is that he should be able to devote more money to the purchase. As his supply of money is limited, he probably effects the purchase by using money which he had intended for the purchase of other commodities. A rise in the *general* price level on the other hand, could not be the direct consequence of money having been diverted from one commodity to another, or from one group of commodities to another, since by hypothesis, we are dealing with the aggregate of *all* transactions; if money had been so diverted, and

CHART I.—Percentage increase in prices of Agricultural Produce and of Wholesale Commodities for the years 1914 to 1922, compared with the average of 1911-1913.



the price of certain commodities thereby increased, the remaining transactions would have to have been carried out with a diminished amount of money, and therefore at lower prices—for the total volume of commodities, and the total amount of money would still have remained the same. Only if the total volume of money had somehow or other been increased in relation to the total volume of commodities, could the general price level have been raised.

Some of the most common misconceptions about the fluctuations in prices, arises out of a failure to realise that money is itself a commodity, subject, like other commodities, to the laws of supply and demand ; what is usually called the *general price level* is determined by those economic influences which establish an equilibrium between the supply of goods and services on the one hand, and the supply of purchasing power, that is to say, currency, bank deposits, etc., on the other hand. The term "purchasing power" is used in preference to the word "money" for the reason that in most civilised countries, the bulk of payments in respect of commercial transactions are made, not by means of legal tender money, but by means of bank deposits transferred from buyer to seller by cheque. Stated in terms of what is known as the "Quantity Theory" of money, a rise in the general price level may be said to occur *only* in direct consequence of one of two causes, namely—

(*a*) an increase in the quantity of available purchasing power in relation to the total quantity of goods or services to be marketed ;

(*b*) a decrease in the total quantity of goods or services in relation to the quantity of purchasing power.

A fall in the general level of prices, arises from circum-

stances the reverse of these. If the quantity of goods and the quantity of purchasing power increase simultaneously, and to the same amount—which is what should occur in a normal expansion of industrial activity—the equilibrium between the two remains unaltered and the general price level is not affected. If, on the other hand, the quantity of purchasing power is increased at a greater rate than the quantity of goods, the equilibrium is disturbed, and prices rise.

One of the causes to which a general rise in prices is often attributed, is an increased demand for commodities. We may apply to this the above principle. A general increase in demand for goods as a whole, resulting in a rise in the price level, can only come about if there is an expansion in the aggregate amount of purchasing power, for it is easy to see that the total number of transactions performed on a higher price level, will have need of a larger amount of purchasing power than if they were performed on a lower price level, other things being equal.[1] Now the supply of purchasing power in a civilised country is by no means constant. The monetary systems of most countries are elastic, permitting the expansion or contraction of purchasing power, according to the demand for money, and it is precisely this elasticity which enables an alteration in the price level to take place. If there

[1] The Quantity Theory of Money is the fundamental theory of monetary economics. The quantity of purchasing power which is actually effective in buying commodities depends, however, not only on the volume of currency notes, bank deposits, etc., existing at any given time, but also upon their "velocity of circulation." It is now generally held that this velocity is subject to very large variation. If the rate at which money circulates falls, prices also fall, and vice versa. Much importance is attached to this side of the monetary problem in connection with the fall in prices during 1920 and 1921.

were a sudden and widespread demand for goods, manufacturers and others would probably follow the common expedient of going to their banks for advances in order to enable them to carry out the purchases they desired to make. The demand for money would thus lead to an expansion of purchasing power, and if this expansion exceeded any corresponding increase in the total volume of commodities and services, prices would rise.

A cause to which a rise in prices is more commonly attributed is the scarcity of commodities. This is a matter of special importance since there is a widely prevalent belief that scarcity was the *sole* cause of the rise in prices during the war. The point is admirably dealt with in the following passage quoted from Prof. Cassel's book on "Money and Foreign Exchanges After 1914." "A diminution in the supply of commodities should properly call for a corresponding reduction in the community's supply of currency. If this is done, then the price level must remain unaltered. If, on the other hand, it is not done, but the community's supply of currency remains unaltered, in spite of a scarcity of commodities having arisen, it is obvious that a general rise in prices must follow. This rise in prices must be proportional to the plentifulness of the supply of currency—i.e. it must be determined by the relation between the actual quantity of currency and that which would have conformed to the new reduced supply of commodities. Let us imagine that it would be possible to express the supply of commodities statistically by an index number, and let us further imagine that this index number has sunk from 100 to 80—i.e. that the community's supply of commodities has been reduced by 20 per cent.—then according to this reasoning, the supply of currency would

also have gone down from 100 to 80. If it has not done so, but has remained at 100, then it is too plentiful in the proportion of 100 : 80, and the consequence must be a rise in price in the same proportion—i.e. the general price level must be raised from 100 to 125.

"During the war there was unquestionably a scarcity of commodities, and this, too, had undoubtedly proved a contributing factor in the rise in price. But this has manifestly been a factor of quite secondary importance. For a reduction in the community's supply of commodities by an average of 20 per cent. all along the line is a very serious matter, and inevitably gives rise to great privation amongst wide classes of the population. But even such scarcity cannot, as we have already seen, serve as a basis of explanation for a rise in prices of more than 25 per cent. Now, as the index figures showing the general price level in the majority of countries soon came to exceed 200, and afterwards, even in the most favourably situated European states, went beyond 300, and in other countries rose even much higher, it is quite clear that there cannot be any question of a possibility of accounting for the rise in prices on the ground of scarcity of commodities."

The principle which has been briefly described in the preceding paragraphs is fundamental to the study of the movement in the general level of prices as it is also to that of war-time and post-war finance, and with this in mind we will now proceed a step further in the analysis of the price movement with which these pages are immediately concerned. It should be remembered that expansion and contraction of purchasing power are not only of common occurrence in normal times but are a necessary condition of the alteration which occurs from time to time

in the aggregate volume of trade, since the greater number of transactions in a trade boom requires a greater volume of purchasing power, both currency notes and bank deposits, to finance them. An expansion of purchasing power in excess of these requirements with the accompanying rise in prices is commonly called *inflation*, and it is the phenomenon of inflation which has been the special characteristic of the price movement between 1913 and 1920.

The outstanding examples of a rise in price consequent upon monetary inflation are to be found in what has occurred in Germany, Austria, Russia, and Poland whose Governments, for the purpose of meeting their national expenses consequent upon the war, adopted the expedient of printing paper money. The printing of currency notes is perhaps the simplest and most direct means of monetary inflation, but it is by no means the only method, and need not be the principal cause of a rise in the price level. In countries such as the United States or the United Kingdom where a great rise in the price level took place, other operations than printing of currency notes had a much greater influence. Legal tender money such as British Treasury notes do not play such a large part in monetary circulation as some people think.[1] As has been already pointed out, the greater part of the monetary transactions in this country consists not in the transference of coins or notes, but of bank deposits, which are transferred by means of cheques. The following figures show the high proportion of bank deposits to legal tender currency. In December, 1913, the total amount of currency in this country was £214,000,000 while the

[1] Prior to 1914 the issue of bank notes in this country was restricted by the Bank Act of 1844, which was suspended at the outbreak of war.

total bank deposits were £1,070,000,000 a proportion roughly of 1 to 4½. Now the volume of bank deposits is governed by credit, and is dependent on the lending policy of the banks. More money, that is to say increased purchasing power, can be obtained, at any rate temporarily, in the shape of money advances from banks. A person can often put himself in the position of being able to give a better price for certain goods if he can obtain a loan from his bank, since he has now more purchasing power at his disposal. The same thing applies in the aggregate. Moreover, credit may be relatively easy or difficult to obtain, depending on the rate of interest charged on bank loans and on other factors, and this will have a direct influence on the total volume of available purchasing power in the country. If bank loans generally become easier to obtain there will be a tendency for traders to avail themselves of this advantage and to borrow from their banks to a larger extent than before, with the result that there will be a tendency for the total volume of available purchasing power to increase in relation to commodities, and prices will therefore tend to rise. This is what sometimes happens when the bank rate is reduced.

Bank loans are now a necessary part of the commercial life of all civilised countries, and the creation of "bank money" to meet a period of industrial activity is essential to the smooth working of the industrial system. But this elasticity of the banking system has its dangers, and it is possible that this very power of giving credit or creating "bank money" may be abused if it is put into effect for purposes other than to meet the legitimate needs of trade. The expansion of "bank money" beyond these needs is commonly called *inflation of credit*,

and we have here another illustration of the way in which an increase in the total volume of purchasing power in a community may lead to a rise in the general level of prices. With these considerations in mind it will be convenient to examine what happened in this country during the period 1914-18.

The Period of Rising Prices in the United Kingdom.

With the outbreak of war there arose an immense demand for commodities of various kinds, particularly those required to meet the needs of the Army and Navy, and as the war proceeded these demands tended both to increase in volume and to become more difficult to fulfil. Labour became scarce, shipping became scarce, and the amount of munitions expended at the front increased. Thus a large and expanding demand for goods was created by the circumstances of the war, in addition to most of the normal demands of the civil population, while at the same time the supply of certain goods, especially of those commodities dependent on overseas transport, tended to become scarce. Both these factors operated to raise the level of prices. Moreover, in most of the war contracts quickness of delivery was an essential condition, and one to which price in many cases was of secondary importance.

But there was a much more important factor in the situation than this, namely, the fact that the Government was the principal, indeed as regards many commodities, the sole buyer. Private contracts formed a progressively smaller proportion of the total commercial transactions, State purchases a progressively larger portion. The full consequence of this depended, however, on the special relation between the State and the banks, and upon the

control exercised by the Government through the Treasury over the issue of currency notes, and of short term bills.

As the war proceeded all the belligerent Governments were confronted with the problem of paying for the enormous war purchases which they had to make. Taxation on the pre-war scale was wholly inadequate to meet the additional charges on the National Exchequer, and the Governments were faced with choosing between taxation on an unprecedented scale—or borrowing. Whether by deliberate choice or by necessity all these Governments fell back mainly on the second method, and Government borrowings in the principal belligerent countries assumed enormous proportions before the end of 1918. It would take too long to give anything like a full account of the inflationary effect of such borrowing, but the chief features in regard to this country may be briefly mentioned. The Government borrowed both the private savings of individuals, and from the banks. It also borrowed from private persons who in turn borrowed from their banks in order to lend to the Government. These bank loans to the Government were in addition to the existing bank advances to private traders, so that the net result was an immense increase in purchasing power, and this increased purchasing power passed in turn from the Government into the hands of their contractors, spreading from buyer to seller throughout the industrial system, ultimately being used to pay for wages and raw materials. But the effect of this was very greatly to increase the total volume of purchasing power within the community in relation to the total volume of commodities, thus bringing about a general and very large rise in the price level. Moreover,

the Government borrowing had a secondary effect on the expansion of "bank money," since the War Loans provided a large amount of good collateral, thereby facilitating borrowing from the banks by private traders.

But the key to the process of inflation in this country is to be found in the direct borrowing by the Government from the Bank of England, by the method known as "Ways and Means Advances." A small proportion of the war debt was borrowed in this way, but its importance lies in the fact that this expedient was one of the most potent inflationary instruments of all. The following quotation from the first interim report of the Cunliffe "Committee on Currency and Foreign Exchanges after the War"[1] explains how inflation was thereby brought about:—

"This process has had results of such far-reaching importance that it may be useful to set out in detail the manner in which it operates. Suppose, for example, that in a given week the Government require £10,000,000 over and above the receipts from taxation and loans from the public. They apply for an advance from the Bank of England, which by a book entry places the amount required to the credit of Public Deposits in the same way as any other banker credits the account of a customer when he grants him temporary accommodation. The amount is then paid out to contractors and other Government creditors, and passes, when the cheques are cleared, to the credit of their bankers in the books of the Bank of England—in other words is transferred from Public to 'Other' Deposits, the effect of the whole transaction thus being to increase by £10,000,000 the purchasing power

[1] Cd. 9182, footnote, p. 4.

in the hands of the public in the form of deposits in the Joint Stock Banks and the bankers' cash at the Bank of England by the same amount. The bankers' liabilities to depositors having thus increased by £10,000,000, and their cash reserves by an equal amount, their proportion of cash to liabilities (which was normally before the war something under 20 per cent.) is improved, with the result that they are in a position to make advances to their customers to an amount equal to four or five times the sum added to their cash reserves, or, in the absence of demand for such accommodation, to increase their investments by the difference between the cash received and the proportion they require to hold against the increase of their deposit liabilities. Since the outbreak of war it is the second procedure which has in the main been followed, the surplus cash having been used to subscribe for Treasury Bills and other Government securities. The money so subscribed has again been spent by the Government, and returned in the manner above described to the bankers' cash balances, the process being repeated again and again until each £10,000,000 originally advanced by the Bank of England has created new deposits representing new purchasing power to several times that amount."

It has sometimes been thought that the rise in the price level was primarily the consequence of printing Treasury notes. This is, however, far from being the case. The issue of these notes in this country has been a consequence, rather than a cause, of inflation. The supply of cash in this form was during the war and still is (subject to a certain limit) permitted according to requirements, and these requirements depend upon the amount of credit created by the banks, and the price

level established as a result of this creation of credit. Depositors are entitled to cash cheques drawn upon their deposits at the banks when they wish to do so for the payment of wages and for similar purposes. With the expansion of deposits during the war, with the higher price level and the higher general level of wages, the demand for currency notes was thus increased, and their total volume in circulation swelled. But this event took place much later in the chain of causation than was widely supposed to be the case.

To sum up, the relation between the price level in the United Kingdom, and the supply of money, may briefly be set out as follows :—

1. The most important purchasing power consists of cheques drawn upon bank deposits.

2. The volume of bank deposits is largely determined by the freedom with which the banks grant loans.

3. The lending policy of the banks is, however, effectively controlled by the policy of the central bank, i.e. the Bank of England which, by expanding or contracting its assets and liabilities, can increase or diminish the cash reserves of the joint stock banks upon which their ability to lend, depends.

4. Ways and Means advances increased the assets of the Bank of England, and consequently swelled the cash reserves of the joint stock banks in the manner described in the above quotation from the Cunliffe Report.

5. This in turn enabled the banks to increase their loans to their customers, with the effect that deposits were again expanded.

6. This newly created purchasing power increased the aggregate volume of purchasing power in the country with the result that the general level of prices rose.

7. To carry out, at the higher price level those transactions which are commonly paid for in currency notes, the public required a larger supply of these notes than before, and thus the total volume of notes in circulation was increased.

The essential point in this sequence was that the Bank of England was *lending*. The effect would have been the same whether these loans had been to the Government or to anyone else.

The statistics of the growth of legal tender currency during the years 1913-19 is given in Table II., and the growth of bank deposits during the same period, in Table III. (p. 36).

TABLE II.

Currency Notes and Bank of England Notes in circulation in the United Kingdom, 1913-19.

Year.	Currency Notes.	Bank of England Notes.
	Million Pounds.	Million Pounds.
1913	—	29·6
1914	38·5	36·2
1915	103·1	35·3
1916	150·1	39·9
1917	212·8	46·6
1918	323·2	70·2
1919	356·2	87·3

Such in brief outline were the salient causes of the upward price movement in this country between the years 1913-19. Government borrowing was the direct cause of inflation ; inflation the primary cause of the rise in prices ; and in comparison with these influences, other

TABLE III.

Commercial and Bank of England Deposits in the United Kingdom, 1913-19.

Year.	Commercial Banks.	Bank of England. (Public and "Other".)
	Million Pounds.	Million Pounds.
1913	1070·7	71·3
1914	1167·3	154·9
1915	1271·8	161·6
1916	1478·9	178·8
1917	1742·9	166·2
1918	2102·0	172·7
1919	2398·8	199·8

factors bearing upon general prices had, at most, a relatively small effect.

The general level of prices during this period had risen to 147 per cent., and the level of agricultural prices to 158 per cent. above pre-war. The movement of the respective index figures is given in the table on page 21. This rise in price was a serious matter. It was without precedent in this country for more than a hundred years. It brought about a great rise in the cost of living and deeply affected the whole industrial life of the country. In the end it became a cause for alarm. There resulted widespread discontent; a demand for increased wages arose in industry after industry, which had no sooner been settled than the level of prices had again moved upwards, involving an increased cost of living and a further demand for higher wages. Not only in the United Kingdom, but throughout the belligerent and other countries Governments were confronted

with this vicious circle, and in order to attempt to check it, practically all countries which were involved in the price movement adopted the expedient of fixing maximum prices for commodities, and a vast structure of statutory prices was erected over the commercial life of nearly every civilised nation. Looking back on the latter years of the war we are thus met with a curious spectacle; not only in the United States and in England, but in France, Germany, Italy, Austria, and elsewhere, each Government would seem to have been at cross purposes, contributing to a rise in price with one hand, and trying to check it with the other. To what extent the policy of price fixing was a necessity, and to what extent it may have diminished the need of borrowing by inflationary methods need not be explored here. The arguments for it were undoubtedly strong, and the fact that it was adopted as widely as the expedient of inflation itself, suggests that in the circumstances of the war, it was unavoidable.

This brings us to the end of the period of rising prices and to the beginning of the crisis of 1920, when the price movement reached a peak and took a sudden turn downward. One other point, however, remains to be mentioned.

On page 19 above, a comparison was made between wheat prices and the imports of wheat into this country, in which it was pointed out that the fall in prices could not be accounted for by an increase in the supply of wheat imported into this country during 1920-22. It might be replied, however: "True that there was no substantial increase in the supply of wheat during this period, but it is well known that in America and elsewhere prices also declined rapidly. Was it not

therefore the low price rather than the abundance of imported wheat that caused the trouble? Was it not the competition of cheap wheat from abroad which knocked the bottom out of the British wheat market, thus compelling the British grower in turn to reduce his prices?" To answer this question, it will be necessary to examine what happened in America, the chief wheat exporting country in the world, during the period under review. The connection, however, between the fall in the *dollar* price of American wheat and that of the *sterling* price of British wheat is by no means a simple one; nor must the fact be overlooked, which has already been referred to in Chapter I., that the American wheat grower, whose competition it may be alleged had ruined the British grower, had himself suffered in the crisis as greatly, if not even more disastrously, than his British competitor. How is it that the American wheat producer put wheat on the British market at a price which not only involved him in loss, but which brought him to the verge of bankruptcy, and this at a time when there was no world surplus of wheat? In exploring this question it must be remembered that prices everywhere were in a state of flux. There was no stationary standard of values, not even of gold. The upheaval of prices had been world-wide, and the relation between the monetary standards of one country and another, that is to say, the "rate of exchange," had suddenly become a question of unprecedented importance.

Not only therefore to ascertain the effect of the price movement of American wheat and other agricultural commodities on the crisis in this country, but for certain other reasons, it is necessary to examine briefly the corresponding price movement in the United States.

These other reasons will emerge with their proper significance later on, but for the sake of clearness it may be stated that they relate to the question of the alteration in the purchasing power of gold, America being the chief country in the world to retain a gold basis for its currency. In most countries which departed from this standard at the outbreak of war, there was an avowed intention, or at least a hope, of returning to it when the war was over. What the process of returning to a gold standard meant, and what the effect of this process was on prices, especially in England, we shall have to examine. On this question, the course of events in the United States had a very important bearing.

The Period of Rising Prices in the United States.

The price index of agricultural produce in America showed an advance of 131 per cent. between 1913 and 1919. The index of wheat prices rose over the same period by 172 per cent. Agricultural prices reached their peak in April, 1920, and thereafter fell without break during the following twelve months. In general character the price curve resembles that of British agricultural produce, showing a gradual upward movement from 1914 to the spring of 1920, followed by a rapid downward movement. How far this movement of agricultural prices, and particularly the sudden decline in 1920, was affected by increase or decrease in production, exports, or consumption of agricultural produce in the United States, it is not necessary to discuss in detail, particularly as the whole question was fully examined by the Joint Commission of Agricultural Enquiry appointed to inquire into the causes of the agricultural crisis in America. There is no doubt that these questions of

supply did have an influence on the movement of prices, but there is also little doubt that other causes greatly predominated. In the report of the Joint Commission referred to above which was published in 1922, a comparison is made between the per capita production, the per capita consumption, exports, and prices of wheat by years from 1910 to 1920. Exports began to rise rapidly in 1913, reaching a peak in 1914, dropping again to a low point in 1917, which was a year of small production in the United States, rising again in 1918, falling in 1919 and rising in 1920. Examination of these fluctuations in the exports, compared with the alteration in prices during the same period shows, however, a lack of any definite relation between the two. The greatest rise in the price of wheat did not take place until 1917, during which year the exports were relatively low, while in 1920, the year of rapidly falling prices, there was a sharp increase in exports. Production in 1917 was practically constant, while in 1920 it fell. If one compares in a similar manner the fluctuation in wheat prices during this period with the production and consumption in the United States, the same lack of any definite relationship appears. The Commission of Enquiry observe that the rapid fall in the per capita consumption of wheat in 1920 as compared with 1919, from 6·9 bushels to 4·6 bushels, probably had a substantial effect upon prices, but find that it is impossible to determine any close relationship between the variation in production and consumption on the one hand and the prices of wheat on the other. "The price of wheat," the report states, "apparently bears a closer relation to the general level of prices than it does to fluctuations of exports. In other words, the increased

price of wheat was apparently due in a larger measure to factors which caused a general increase in prices in 1916, 1917, 1918, and 1919, than to either of the factors of production or export," and again, "Examination of all of the data touching upon the factors of supply and demand, which should normally be reflected in the price, seems to lead to the conclusion that other factors than those indicated in the charts and tables which the commission has been able to compile has had a larger influence in determining the price."

The figures year by year from 1914-22, showing the movement of the index of agricultural prices compared with that of general commodity prices, are given in the following table based on figures published by the U.S. Bureau of Labour Statistics, and the U.S. Department of Agriculture (1913 = 100) :—

TABLE IV.

Year.	Farm Products.	All Commodities.
1913	100	100
1914	103	98
1915	104	101
1916	123	127
1917	190	177
1918	218	194
1919	231	206
1920	218	226
1921	124	147
1922	133	149

The first thing noticeable about these figures is that the general character of these price movements, as in the case of the similar table for British prices, is the same, except that in this case the fall in agricultural prices is greater

than the fall in the price of other commodities. (To this exception reference will be made at a later stage.) In other words, we are driven to seek the cause of the rise and fall of agricultural prices in America, as in this country, amongst those influences which led to an alteration in the general level of prices rather than in any independent movement specifically related to agricultural produce.

Bearing in mind the two causes referred to on page 24 which can lead to a rise in the general level of prices, we may examine what happened in the United States between 1914 and 1919. It has been shown in Chapter I. that the general rise and fall in prices after the outbreak of war was a world-wide phenomenon, but the circumstances of each country had certain peculiar characteristics arising out of its situation, its relation to belligerent countries or to the active part which it took in the war. This was particularly the case with America. Unlike Great Britain, from 1914 to 1917 the United States was not a direct participant in the war, and the United States Government was therefore not under the necessity of borrowing on a large scale to meet the costs of war, a factor which played such a large part in the inflation of prices in England. Moreover, unlike the belligerent countries, the United States did not abandon the gold basis of their currency at the outbreak of war (although between September, 1917, and June, 1919, the export of gold from America was prohibited). Nevertheless prices in America rose. In the first years of the war, although not actively engaged in it, America participated to a very large extent in the manufacture of the materials of warfare for the Allies. The demand for munitions and other commodities

increased until it reached huge proportions, and as the war continued and armies expanded, it put an ever-increasing strain on the American manufacturing resources. This led to a favourable balance of trade in America, and consequently to an inflow of gold, which in turn enabled American banks to expand credit and caused a rise in the price level in a manner described below.

The exact effect of the European demand for agricultural produce on agricultural prices in America is by no means simple. The rise in price of wheat, for example, between 1914 and 1917, is certainly not explained by an increased European demand for wheat, exports having during that period continuously declined. It is probable, however, that the general reaction of the greater industrial activity, and the consequent increase in wages had the effect of stimulating the home demand for wheat, and thus increasing its price, and the same thing applies to other agricultural produce.

During the period of 1914-17 which we are now discussing, two things, which ultimately had a profound influence upon the monetary situation in America, were taking place or had taken place, namely (1) the continuous migration of gold into America, and (2) the coming into operation of the Federal Reserve system of banking.

The retention of the gold standard of currency in the United States, placed that country in an almost unique position. Most of the belligerent countries had abandoned the gold standard so far as they had one at the outbreak of war, and some of the neutrals subsequently followed suit. Moreover, as the war proceeded and the necessity

for making purchases from America increased, these countries were more and more obliged, on account of their depreciated currencies, to pay for such purchases in gold. America would take gold and Europe did not want it. America in consequence became flooded with it.

Gold, as is well known, has widely been adopted as a basis of currency because the world supply has been fairly uniform, and its cost of production fairly constant. Its chief value for this purpose is therefore that it helps to ensure in normal times that the prices of commodities and foreign exchanges remain fairly stable. Moreover, most banking systems of the world maintain, either under statute or by convention, certain proportions between gold and legal tender notes, and between deposits and the "cash" which the banks hold in reserve. But gold is a commodity like any other thing that is bought and sold, and when the supply of it is suddenly increased its value tends to fall, or in other words, the prices of other commodities in terms of gold tend to rise. This is precisely what occurred in America in consequence of the great influx of gold from Europe.

The real importance of this transference of gold in regard to its effect on prices was that it enabled the American banking system to increase very largely its loans to the business community (and later to the Government) without infringement of the laws regulating the proportion of loans to the reserves held by the banks. No suspension of this statutory reserve ratio was necessary. From June, 1914, to June, 1917, loans and discounts of State and National Banks, excluding Saving Banks, increased by 41 per cent. In the same period loans and discounts of National Banks increased by 39 per cent. Prior to this period the average annual

increase of loans and discounts of State and National Banks other than Saving Banks had been about 6 per cent. The rate of increase during this period was, therefore, somewhat more than double the normal increase ; the major portion of the increases both in loans and discounts occurred in 1916 and the early part of 1917, and were fairly coincident with the heavy influx of gold which began in 1916. The net imports of gold in this year were 403,759,753 dollars and in 1917 were 685,254,801 dollars. At the same time there was an increase in the note circulation of approximately 22 per cent. from the end of 1914 to the end of 1917.

In short, the concentration of gold in the U.S.A. led to inflation.

It is curious to observe that even in official banking circles there seems to have been some confusion of opinion as regards the stabilising influence of gold. The gold standard is by no means invulnerable ; it is not an absolute guarantee of price stability. It was moderately effective before the war when the demand and supply of gold kept pace with each other, but when the distribution is upset it is no longer a guarantee. The fact is that the American banking system was not proof against the conditions which arose at the beginning of the war when half the world suddenly abandoned the use of gold as the basis of their currencies, and began to spend it in America in payment for munitions of war.

The idea that inflation could not take place in a country which retained a gold standard was shown to be wrong, but it was only the experience of the war that clearly brought this to light. Had people realised the fundamental axiom that an increase in the volume of purchasing power relative to the quantity of goods to be

marketed, however it may come about, inevitably leads to a rise in prices, this misconception might never have arisen. As it was, gold poured into the United States and the purchasing power of the dollar rapidly declined. It gave rise to conditions in America not unlike what occurred in this country and elsewhere between the years 1848 and 1856, when owing to the discovery of new sources of gold in California and Australia the supply was abnormally increased. Then also the purchasing power of gold fell, and a rise in the general level of commodity prices consequently took place.

But the full inflationary effect of the migration of gold to America was undoubtedly brought about by the purely automatic way in which the statutory reserve principle was allowed to operate in the Federal Reserve Banks. As Prof. Cassel says: "Had the influx of gold been comparatively moderate, and had the central banks concerned admitted this gold to their gold reserves without increasing their note circulation on that account, or else without creating any additional currency, then certainly the value of gold might have been kept up."[1]

The net result was that in spite of the fact that the United States did not enter the war till 1917, and were not till then under the necessity of borrowing to meet war costs, the special circumstances of the war brought about conditions in America, which caused a general expansion of purchasing power, and a rise in the price level on a scale hardly less than in this country. It was an event of fundamental importance since it supplies the key, or at any rate one of the keys, to the whole problem under discussion. Its importance lies in the fact that dollar

[1] "Money and Foreign Exchanges after 1914," p. 71.

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[1] "Money and Foreign Exchanges after 1914," p. 71.

prices, on account of the retention of the gold standard, were *gold* prices, and that any rise that took place in the general level of dollar prices during this period meant a *fall in the purchasing power of gold.* In actual fact the purchasing power of gold, as measured by this standard, fell between 1914 and 1917 by approximately 43 per cent.

The Federal Reserve Act establishing the present banking system in the U.S.A. was passed on November 16, 1914, and may be described as a measure for introducing into America the rediscounting banking system. Under the Act are established not one but twelve "central" banks, one in each of twelve districts, each being the rediscounting bank for the "member" banks of its district. These twelve are subject to a co-ordinating body called the Federal Reserve Board.[1] All national banks (which alone are privileged to be banks of issue) must be "member banks" of the Federal Reserve System, and state banks and trust companies may also be members if they have the requisite capital. Every member bank has the right of having "eligible paper" rediscounted by the Federal Reserve Bank of its district. Under the Federal Reserve Act as originally passed, one-third of the statutory reserves held by a member bank had to be in cash. Of the remainder a certain proportion had to be on deposit in the Federal Reserve Bank. Under an amending Act, however, passed in 1917, soon after the entry of the United States

[1] For an account of the structure and operation during the period under review of the Federal Reserve System, see Report of the Commission of Agricultural Inquiry, Pt. II., and particularly as regards the economic aspect, Hawtrey, "Monetary Reconstruction," Chap. V.

into the war, these provisions were altered, it being now laid down that the *whole* reserve must be on deposit with the Federal Reserve Bank, the amount of cash held by the member bank being left to its discretion. This alteration had an important effect since it added substantially to the "elasticity" of the Federal Reserve System. When reserves fell below the prescribed proportion they could now be replenished by rediscounting eligible paper. To insure the maintenance of the gold standard, the Federal Reserve Banks are required to keep reserves against their liabilities. Each Federal Reserve Bank, and all Federal Reserve Banks in aggregate are required to maintain 35 per cent. in gold or lawful paper money against deposit liabilities, and 40 per cent. in gold against currency liabilities.

In 1917 the United States entered the war as a belligerent, and the financial situation in America consequently underwent a profound change. The Government now found itself under the necessity of raising immense sums of money not only to meet its own war costs, but in order to give financial assistance to its Allies. For this purpose, like the other belligerent Governments, it had recourse to the banks, and from this point an inflationary process similar to what has been described above in respect of this country began, adding its effect to the upward price movement which had already taken place in consequence of the influx of gold and other causes.

As their deposit liabilities grew, the banks were compelled to make up the reserve proportions by rediscounting. From March, 1917, to August, 1918, loans and discounts and bills bought by Federal Reserve Banks increased from $104,579,000 to $1,660,798,000, an

increase of 1,487 per cent. Inflation also led to a rise in the demand for currency, which could only be met by the supply of Federal Reserve Notes against eligible paper, and during the same period Federal Reserve Notes increased from $357,610,000 to $2,092,708,000, an increase of 483 per cent. The general level of prices increased by 17·4 per cent. during these months. With the Armistice came a slight pause in the inflationary process. Prices fell a few points, the expansion of credit stopped, and there was a slight reduction in the amount of currency in circulation. But it must be remembered that during this period the business community was largely engaged in closing down war contracts and preparing for a return to peace occupation, and during this interval its need for money temporarily slackened.

We now reach the year 1919 which immediately preceded the general break in prices. Some description of this period has already been given in Chapter I., and it is true to say that the psychological mood of business men in America was not unlike that in this country. The prevailing tone was optimistic, every one looked forward to greater industrial activity and prosperity, and this spirit very soon broke out into a fever of speculation which became the chief characteristic of the post-war period. Once more there was a demand on the banks for money, this time mainly for commercial purposes; there was a further expansion of credit, and of the Federal Reserve Note issue; the inflationary process took a new lease of life, and between March, 1919, and May, 1920, prices showed a further rise of 33 per cent.

To sum up—in 1919 the position in the United States was as follows. The country was confronted with—

(*a*) An unprecedented demand for goods.

(*b*) The effect of an unprecedented inflow of gold (this had stopped in 1917 when America came into the war).

(*c*) A banking system which, in the circumstances, allowed of very great expansion of credit and of currency *so long as its policy was dictated solely by consideration of the statutory reserve ratios.*

Monetary policy was a vital condition, and as we shall see later on, was of very great importance not only in regard to the fluctuation in prices in America, but also in its effect on this country. So long as the policy of the Federal Reserve Board was based on nothing more than the statutory reserve ratio, inflation was, in the circumstances, bound to run its course. But the rise in prices during 1919 did at last cause serious alarm. Where was this movement to stop? Could anything, and ought anything be done to check it?

The only practical step which could check the expansion of credit was an increase in the discount rate, an increase, moreover, which would be sufficient to give some definite check to borrowing. The monetary situation called for a decisive step, the purpose of which would be unmistakable. Such a step rested ultimately with the Federal Reserve Board. But during this period the position of the Federal Reserve Board was an extremely difficult one. So long as the point was not reached where this step would be automatically taken, viz. the point where bank reserves were depleted to an extent bordering on the statutory ratio, there was not the normal reason for making an alteration in the discount rate. Moreover, the Federal Reserve Board, although by this time fully aware of the inflationary movement at work, apparently viewed with some degree of scepticism the

efficacy of this remedy.[1] In addition to this the difficulties were augmented by the flotation of the Victory Loan in June, 1919, the Treasury Department being unwilling to float this loan at a rate of interest high enough to permit an increase in the re-discount rate. The situation was critical. It needed prompt action if the rapid expansion of credit and consequent rise in prices was to be checked. It was in fact dealt with by the Federal Reserve Board with what many people subsequently came to regard as disastrous hesitancy. Up to March, 1919, no steps had been taken in this direction other than that of the Federal Reserve Board addressing letters and circulars to "member" banks exhorting them to confine advances and discounts to essential requirements, and to discourage the making of speculative and non-essential loans. Unfortunately this did not have the desired effect. In spite of this policy of remonstrance, the loans and discounts of member banks, and of the Federal Reserve Banks continued to expand, and prices soared to levels previously unheard of. The following quotation[2] from the Report of the Joint Commission of Agricultural Enquiry gives the Commission's

[1] The precise effect of raising the discount or bank rate is by no means a simple subject, and a full examination of it is beyond the scope of this book. Writers on the subject are sometimes apt to forget that its primary effect is psychological, it is an effect on the *minds* of borrowers, and hence the effect of any particular increase in the rate must depend very largely on the general mood of the borrowing public at the time it is made. What might be effective under some circumstances, might in others be wholly inadequate. It is this consideration which must inevitably make a decision such as that taken by the Federal Reserve Board in May, 1920, difficult, and its results to some degree speculative.

[2] Pt. II. p. 12.

comments on this situation: "The discount policy of the Federal Reserve Banks was again subordinated to the Treasury policy in securing its credit requirements, although at this time the tendency towards expansion, speculation, and extravagance was beginning to be apparent.

"This was clearly the time for a policy of advancing the discount rates of the Federal Reserve Banks. . . .

"It is the opinion of the Commission that a policy of restriction of loans and discounts by advances in the discount rates of the Federal Reserve Banks could and should have been adopted in the early part of 1919, notwithstanding the difficulties which the Treasury Department anticipated in floating the Victory loan if such a policy were adopted.

"It is also the opinion of the Commission that had this policy been adopted in the early part of 1919 much of the expansion, speculation, and extravagance which characterised this post-war period, could have been avoided.

"The Commission also believes that had such a policy been adopted in 1919 the difficulties, hardships, and losses which occurred in 1920-21 as a result of the process of deflation and liquidation would have been diminished."

No action was taken by the Federal Reserve Board in the direction of raising the re-discount rate until December, 1919, when slight advances were made, followed in January and February, 1920, by more radical advances. In the meantime the inflationary movement, accompanied by a still further rise in prices, proceeded, to quote the words of the Commission, in a manner "the like of which has never before been seen in this country or perhaps in the world."

It was not until May, 1920, when the index of general level of prices in the United States had reached 172 per cent. above pre-war, that the Federal Reserve Board grasped the situation with a firmer hand. In this month it was announced that from June 1 the re-discount rate on commercial paper in New York and Chicago was to be 7 per cent. The market discount rate was soon adjusted to $7\frac{3}{4}$ per cent. and then to 8 per cent., and the Federal Reserve Banks exerted themselves in other ways to reduce the volume of credit.

This proved to be the turning-point, inflation slackened, and the general level of prices in the United States began to fall. It was in effect the turning-point not only for the United States but for the whole of the western world, for at this moment began the great downward price movement referred to in Chapter I., which rapidly spread from the United States to England, to Europe, and to the Colonies.

The Period of Falling Prices in the United States.

In May, 1920, prices in America reached their peak when general commodity prices stood at a level 172 per cent. above pre-war. At this date prices began to fall, and America became involved in a process of rapid deflation.

Whatever the cause which led to the break in prices occurring at the moment it did, and it seems certain that the predominant cause was the raising of the re-discount rate, or the knowledge that it was about to be raised, business men now looked to the future from a different point of view. Optimism and extravagance vanished. Expansion of credit and currency notes diminished and ultimately came to an end and the reverse process set in,

and thus the multitude of factors both psychological and economic, which contribute to a trade depression, were set in motion. With dearer money and the changed outlook, merchants who hitherto tended to hold up stocks in anticipation of a rising market, now tended to unload in order to avoid the losses which delay might involve. The banks themselves reacting to the general movement, tended to call in loans. Farmers, to meet their obligations to their banks, tended to sell their live stock before they had completed their fattening, in spite of the fact that they were thereby realising a lower price. Thus one factor introduced another, and the downward price movement very soon gained alarming momentum. This was the period of crisis. The price index showed an unparalleled decline, general commodities falling from 172 per cent. above pre-war in May, 1920, to 89 in December, and to 54 in April 1921. In other words, the index figure had fallen in twelve months from a point to which, in the upward movement, it had taken three and a half years to rise.

In this general avalanche of prices, agriculture had been overwhelmed like every other industry, but by reason of the special circumstances peculiar to the industry (which will be more fully dealt with in the following chapter) the effect of this decline in the price level fell upon agriculture with exceptional severity, causing exceptional hardship.

"This hardship," to quote the words of the Agricultural Commission of Enquiry,[1] "was due, in large measure, to the excessive costs of producing the 1920 crop,[2] and to the slower turnover, which is an incident to farming operations, which made it impossible for the

[1] Pt. II, p. 88. [2] I.e. in consequence of the 1919 inflation.

farmer to liquidate with the same degree of rapidity and the same degree of loss that was possible with the industries having quicker turnovers of stocks, which could be immediately put on the market."

During the whole of this period of falling prices (May, 1920, to April, 1921) the Federal Reserve Board had taken no step to relax the rate of re-discount which had been fixed in May, 1920, and it is not surprising to find, therefore, that the Board again came in for criticism, this time for not *reducing* the re-discount rate earlier. Some measure of deflation had become inevitable after the prolonged rise in prices in previous years, but the serious feature of the price movement in 1920 and 1921 was the unexampled rapidity with which it took place ; a process which at best must be painful, approached very near to being catastrophic.

Just as the raising of the re-discount rate was the only practicable instrument in the hands of the authority controlling the credit policy of the United States, by which it could check inflation, so the lowering of the rate was its only practicable instrument for checking excessively rapid deflation. It was not, however, until May 5, 1921, that the Federal Reserve Board reduced the re-discount rate to 6½ per cent., and subsequently by successive stages, to 4½ per cent. on November 3. This delay in introducing a lower re-discount rate has been the subject of much criticism ; certainly in the opinion of such an authority as Prof. Irving Fisher it was a mistake which cost the country very much unnecessary suffering, and the views of the Agricultural Commission of Enquiry are no less definite :—

"Notwithstanding the apprehensions of the Federal Reserve Board and Federal Reserve Banks regarding the

possible results in a change in policy, the Commission is of the opinion that a more liberal policy could have been adopted in the latter part of 1920 and the early part of 1921, and that the adoption of such a policy would have served to arrest in part the tide of deflation and to reduce the hardships and losses incident thereto."[1]

But the result of a change of policy in the midst of a general decline of prices as the Commission point out is exceedingly difficult to forecast, and the mistake, if mistake it was, probably arose because, to quote Mr. Hawtrey, "the working of the 'vicious circle' of deflation was not understood. It was not realised that a deterrent re-discount rate, once it has taken effect, can safely be reduced, and that the falling prices and shrinking purchasing power will then do their work without extraneous aid."[2]

Wholesale commodity prices in the United States continued to fall until a level 48 per cent. above pre-war was reached in July, 1921, and remained practically at this level throughout the rest of the year. The downward price movement which had been accompanied by acute industrial and agricultural depression was now over, though its effect on industry was far from being at an end, and in 1922 the general level of prices not only showed no further decline, but tended once more to move upwards. We need not follow this movement, since at the moment we are concerned only with the general fall in prices and its consequences, upon which the subsequent movement in 1922 had relatively little bearing.

What *was* of fundamental importance, however, not only for the United States but for the other countries of

[1] Pt. II. p. 88. [2] "Monetary Reconstruction," p. 123.

the world, was the fact that this fall in dollar prices represented an equivalent *increase in the purchasing power of gold.* The problem before England and other countries which had departed to a moderate degree from the gold value of their currencies was to return to it as soon as circumstances permitted, and to return to a gold standard meant, in effect, to restore the pre-war rate of the dollar exchange. The intention to restore the gold standard, and the pursuit of this policy, provides the connecting link between the fall in prices in America and in this country, and consequently between the industrial and agricultural crisis on both sides of the Atlantic. The fact that in 1920 and 1921 the purchasing power of gold had thus been raised by more than 80 per cent., consequently had a profoundly disturbing effect *throughout the world*, adding enormously to the difficulties of restoring the pre-war gold basis of currencies.

Bearing in mind this brief review of the events which occurred in America, we shall be in a position to appreciate the influence of these events on the movement of prices in this country.

The Period of Falling Prices in the United Kingdom.

England emerged from the war as a vast machine concentrated on the production of war material. The Government was overwhelmingly the largest buyer, and the prices of most essential commodities, both manufactured and agricultural, were subject to Government control. The period immediately following the Armistice was primarily one of decontrol and a re-adjustment of industry from war to peace occupations.

Following the Armistice, a slight fall in the general

price level took place, but it did not continue. Contrary to the widely prevalent belief that the end of the war, decontrol, and the release of a large amount of shipping, would rapidly restore prices to the pre-war level, the very reverse took place. As industry settled down into more normal channels, trade began to develop into the boom which, as in America, became the chief feature of 1919. Once more inflation set in. The general level of wholesale prices, according to the "Statist," rose from 137 per cent. to 218 per cent. above the average of January to July, 1914, between the Armistice and March, 1920, and agricultural prices advanced from 139 per cent. to 199 per cent. above pre-war. The monetary statistics of the same period show an increase in the note circulation from 399·2 million pounds at the end of 1918, to 449·0 million pounds at the end of 1919, and a corresponding increase in deposits at joint stock banks from 2,102 million pounds, to 2,398·8 million pounds. In fact, in industrial activity, monetary expansion, the rise in prices, and in the general psychology of the industrial community, the conditions in this country during 1919 show a remarkably close parallel with those in the United States.

Reference has already been made to the controversy which took place in America as to the expediency of raising the re-discount rate as a means of checking the post-war inflation, the delay which took place in applying this remedy, and its effect when it was applied in the early part of 1920. What steps were taken in this country? From April, 1917, to October, 1919, the bank rate remained at 5 per cent.; at the latter date it was raised to 6 per cent., and in April, 1920, to 7 per cent. In this month, the general level of wholesale

prices had reached a point 223 per cent. above pre-war, according to the "Statist" index figures.

Wholesale prices attained their peak in April, 1920; agricultural prices, which had risen sharply at the end of 1919, reached theirs in the same month. Now began that long process of price decline, which was to continue throughout 1920 and 1921, and which proved so disastrous alike to the British agricultural community and to industry generally. What had happened? At the end of 1919, all prices were abnormally high, and every one knew that, sooner or later, they would have to come down, though how or why they should come down, was not so clearly understood.

Opinion on this matter may roughly be classed into three groups :—

1. Those who thought that prices would somehow or other return to normal by themselves through some mysterious process, without any definite steps being taken to *cause* them to do so.

2. Those who believed that it was necessary to restore the gold basis of the £ sterling, and who consequently advocated deflation, with the inevitable accompaniment of a gradual lowering of the general price level, until this result was achieved.

3. Those who believed that a very heavy fall in prices *ought not to be allowed to take place*, but that the value of the £ sterling should be stabilised somewhere between its then depreciated value and its pre-war value.

The first group was represented by a large section of public opinion; the second by most bankers and business men who adhered to the traditional policy of British banking, and who believed in the supreme importance of the normal gold value of the £, by the

Cunliffe Committee on Currency and Foreign Exchanges after the war, by the Cost of Living Committee appointed by the Parliamentary Committee of the Trades Union Congress, and also by other bodies. The third group was represented by such eminent authorities as Mr. Reginald McKenna, Chairman of the Midland Bank, Ltd., Prof. Gustav Cassel, Mr. J. M. Keynes, and others. We are seriously concerned only with the last two groups.

It is impossible, in a book of this size, to deal adequately with the reasons which divided these two groups. They provide one of the most remarkable economic discussions of modern times. Briefly, group 2 thought that the restoration of the gold standard provided the only practical rescue from the muddle of the paper money system. Gold, they believed, by reason of its universal acceptance, and the long custom in its use, was, in normal times, the best guarantee of a reasonably stable price level, besides having other advantages, and the sooner we returned to it, the better. The restoration of the gold sovereign to its old prestige and honourable position, would, moreover, add greatly to the safety and security of our economic organisation. Such a result must be achieved by a process of gradual deflation, a process which was admittedly a painful one, but which, in the end, would be of such benefit as to compensate for the difficulties and losses which would necessarily be involved in the accompanying general fall of the price level. Group 3 thought that the losses and hardships resulting from this process, the depression and disorganisation of trade, the growth of unemployment and consequent labour troubles, the placing of unjust burdens on many debtors to the advantage of

creditors, and the possibility even of permanent injury to certain industries, would outweigh any advantages to be derived from it, and should not be deliberately incurred if they could be avoided, even if such a policy meant—as it did—abandoning the pursuit of a policy aiming at the restoration of the pre-war gold value of the £. This school held that the supreme need of the moment was neither deflation nor inflation, but a stable level of prices.

In an article in the "Economic Journal" for March, 1920, Prof. Cassel expressed the opinion that a process which aimed at reducing prices to their former level would ultimately prove still more disastrous than the process of inflation had been. The prospect of a long period of falling prices would kill all enterprise and hamper reconstruction. Furthermore, an increase in the value of gold would, for many countries, aggravate the difficulties of reverting to a gold standard, and very seriously increase their already overwhelming financial burdens. Mr. H. D. Henderson put this point of view with no less emphasis,[1] ". . . deliberately to bring about a curtailment of production, a restriction of industrial activity (and this is what a policy of drastic deflation must mean), would involve a preposterous paradox. So preposterous, indeed, that it may almost seem incredible. Surely, it may be suggested, there can be no danger of a crippling of industry amid the present world-hunger for goods." Mr. Reginald McKenna, on January 28, 1921, dealing with the situation in retrospect, said : "Two years ago, when we were suffering the

[1] "Report on the Cost of Living" published by the Parliamentary Committee of the Trades Union Congress.

discomfort of a rapid rise in the cost of living, I ventured upon a word of warning. Although the high prices were due to the monetary and credit inflation, consequent upon the immense borrowing by the Government during the war, I endeavoured to show that any attempt to drive prices down by a policy of forced deflation would lead to grave trade depression and widespread unemployment.

"Last year, when I addressed you, a policy of deflation had been publicly announced and steadily pursued for a considerable period. I discussed on that occasion inflation and deflation in detail, and outlined so far as I could the monetary, trade and social conditions which arose in either case. We have recently learned of the evil consequences of deflation in the school of experience and this policy has for the time being fallen into disrepute. But unfortunately the lesson has had the effect of turning a considerable body of opinion back in favour of inflation, and we seem now to have in prospect the regular alternation between the two policies, each to be adopted in turn as a remedy for the other. . . .

"The truth is, of course, that both are bad. What is needed is stability, the point from which both alike proceed in opposite directions. When we have stability of prices, we have a basis upon which trade can be carried on with confidence. Manufacturers, merchants, and retailers are then able to make their contracts with a reasonable assurance that the debts created under the contracts will be paid when due in a currency of the same purchasing value as it had when the obligations were assumed."

What actually happened was, that the opinions of group 2 prevailed. The position of the British banks

was stated by Sir Felix Schuster as follows[1] : "Countries which had departed from their pre-war gold standard must aim at deflating their currencies gradually so as to inflict the least injury, but with one object in view, a return as soon as possible to the pre-war gold standard. That would be the policy of the Bankers of the United Kingdom, and until that object was attained, he thought they must adhere to a policy of gradual deflation—certainly in this country."

The monetary policy recommended in the Interim Report of the Cunliffe Committee on Currency and Foreign Exchanges after the war, dated August 15, 1918, was the restoration of an "effective gold standard," for which purpose it stated the pre-requisites to be—

(*a*) the cessation of Government borrowing as soon as possible after the war ;

(*b*) the raising and making effective of the Bank of England discount rate ;

(*c*) the limitation by law, as soon as practicable, of the issue of fiduciary notes.

This became the official policy. The fixing of a legal maximum to the fiduciary issue of currency was, in fact, brought about by Treasury Minute in November, 1919. The Bank of England discount rate was raised, as already mentioned, to 6 per cent. in October, 1919, and to 7 per cent. in April, 1920.

Thus did this country set out upon the long and painful process of deflation. To restore an effective gold standard meant, as we have seen, to restore the pre-war parity of the dollar exchange, and this now became the aim of our monetary policy, to which much public attention was directed during the following two

[1] Quoted from "Stabilisation," by E. M. H. Lloyd.

years.[1] But what was the effect on prices? The Joint Committee on the Cost of Living, appointed by the Parliamentary Committee of the Trades Union Congress, in their report published in August, 1920, considered that the restoration of the gold standard would involve a "reduction in the general level of prices by about 20 per cent." We know now, having learned by bitter experience, how far from the truth such an estimate lay. Instead of a 20 per cent. decline, English prices fell altogether from 212 per cent. above pre-war, in May, 1920, to 55 per cent. in December, 1922. What was the reason of this wide divergence?

The explanation lies in the fact that not only had the paper £ depreciated in value between 1914 and 1920, but so also had the gold dollar. To restore the dollar exchange might not have been a difficult matter if the purchasing power of the dollar had remained where it was. But as we know, it did not. What the Cost of Living Committee had overlooked, or were unaware of, was the fact that the Federal Reserve Board had put in motion a policy of drastic deflation, and the purchasing power of the gold dollar was, consequently, continuously and rapidly rising during 1920. In effect, the value of gold had been raised by more than 80 per cent. in about eighteen months, and a more than 80 per cent. rise in the value of the £ sterling, involving a more than 55 per cent. fall in the price level was consequently

[1] It would be wrong to suppose that the process of deflation was throughout the whole period, *deliberate*. Once started it proceeded largely by its own impetus. But the fact that the American price level was also falling, and that our policy was to restore the dollar exchange to its pre-war parity, prevented steps being taken in this country to check the fall in prices.

necessary to bring it back to its gold equivalent. We can thus appreciate the full importance of the American monetary policy described in the preceding section, and its bearing on our own ; how it added to our monetary difficulties, how much longer and more severe it made our own process of deflation, and how largely it contributed to the industrial paralysis which accompanied this process in the United Kingdom. The plain truth is, that when we adopted the policy of restoring the gold value of the £, in a sense we handed over our fate to the Federal Reserve Board of America. America and England were both deflating simultaneously, England with the avowed object of catching up upon America, but like a rainbow, the more we pursued the dollar the more it receded ; the more the purchasing power of the paper £ was allowed to rise, the more had the gold dollar risen, and thus the difficult process of deflation became infinitely more difficult and more protracted.

In the disastrous fall in prices which accompanied these steps, agriculture, like every other industry, was caught. Once set in motion, the landslide swept everything before it and all the familiar symptoms of acute trade depression quickly began to show themselves. Between May, 1920, and December, 1921, the general level of prices had declined by 48 per cent., and agricultural prices had fallen by 33 per cent. Agriculture, like other industries, was confronted with the difficulties which are an inevitable accompaniment of a declining price level. Farmers who had laid out their money on materials, labour, or land, when prices were at a higher level, were compelled to realise the produce of their industry when the price level was very much

lower, and so rapid was the general fall in prices, that not only did anticipated profits disappear, but in a countless number of cases, farmers were involved in serious, if not disastrous, loss.

Hence the agricultural crisis.

While it would be wrong to attribute the *whole* fall in the general level of prices directly to the steps taken with the object of restoring the gold standard, it cannot be denied that these steps helped to set in motion those innumerable happenings which contributed to the trade depression. A complete analysis of the causes of the price movement of 1920-22, either in this country or America, or elsewhere, would lead into a discussion of what are commonly known as "trade cycles," and this is beyond the scope of this chapter. Many factors contributed ; as in America, once the downward movement was started, one factor introduced another ; a general mood of optimism gave way to pessimism ; buyers, on the one hand, tended to hold back, fearing a further drop in prices ; manufacturers, on the other hand, tended to unload their stocks, and the cumulative effect of these influences, caused a still further fall in the general price level. Whatever the bearing on prices of the complicated action and reaction of these economic forces, there can be no doubt at all that the effect of the policy of deflation, and of a high bank rate, was to aggravate the industrial and agricultural crisis, and to increase the unemployment and other hardships, consequent upon it ; indeed, those who were its strongest advocates, could but regard these effects as a necessary evil which had to be faced.

Had the immediate welfare of industry been the only concern, some alleviation might at this time have been

given by a lower bank rate. There were, naturally, many in this country, as in America, who thought that a lower bank rate should have been adopted earlier than was actually done, as a relief to the conditions of industrial depression which prevailed, but, as Mr. Lloyd aptly remarks:[1] ". . . whereas during the war, finance was the servant, it is now the master." We had already embarked on the heroic task of restoring the gold value of the £, from which there was intended to be no going back. A step such as the reduction of the bank rate at this moment, might have meant diminishing the progress towards the very result which it was the object, or one of the objects, of the high bank rate to achieve. No relief was actually afforded in this direction until April, 1921, when the rate was reduced to 6½ per cent. It was further reduced by stages at comparatively short intervals, but it was not until July, 1922, that the low rate of 3 per cent. was finally reached. In 1922, for the first time since the outbreak of war, the general level of prices showed definite signs of stabilisation. The avalanche had at last come to rest.[2]

The foregoing pages in brief outline give the economic conditions which preceded and accompanied the

[1] "Stabilisation," by E. M. H. Lloyd.

[2] In this country the active pursuit of a policy of deflation seems to have come to an end, at any rate temporarily, during the summer of 1923. It is true that the recommendations of the Cunliffe Committee still form the official policy of the British Government, and there is still (March, 1924) a fixed maximum to the fiduciary issue of currency notes, and a steady reduction of the floating debt, but on the other hand there is no evidence of a restrictive policy being deliberately pursued by the banks, and the course of wholesale prices since July, 1923, has been upward and not downward.

agricultural crisis. Having threaded our way through the labyrinth of events which contributed to the rise in prices culminating in the spring of 1920, and the fall in prices ending sometime during 1922, it is, perhaps, less difficult to realise the widespread interdependence of the factors contributing to the situation which confronted British agriculture at the end of 1920, or to perceive how remote were the initial causes of the agricultural depression. In monetary deflation lay the origin of this depression, and as the foregoing analysis has shown, it was an operation which involved not merely the monetary policy of the Treasury and banks of the United Kingdom, but those of other countries, particularly the United States of America.

It is easy to picture the British farmer at the time when he first examined his balance sheet after disposing of his crops of 1920 and 1921, wondering as to the cause of his unexpected losses, or trying to imagine what the future course of agricultural prices might bring him. It would, indeed, seem a far cry from the loss thus revealed to the monetary policy of the American banks ; yet, having followed out the analysis of the economic events of the preceding years, we cannot escape the conclusion that one of the primary contributory causes of the deficit on his trading operations which the British farmer had thus to face, was to be found in the policy pursued by the Federal Reserve Board of the United States.

Such were the causes of the almost world-wide price movement of which the agricultural crisis was little more than a symptom ; a movement of whose dimensions few who were involved in it had any conception. It was

like a great tidal wave, in which the farmer, no less than the manufacturer or the merchant, was overwhelmed. Like a helpless swimmer, he was carried along with the flow, and back with the ebb, unable to guess when the one would cease and the other begin. As was the case with many other people, he reacted to the prevailing mood during the rising tide, and was tempted to commitments which a more prudent policy might have forbidden. But how was he to know when the tide would turn? All that was clear to him was that the 1919 crop fetched a very good price, and the 1921 crop a very bad price. Small blame to the farmer, therefore, when, confronted with a movement he did not understand and could not check, if he fell back upon a drastic curtailment of his cost of production, even though it involved, as it did, great hardships to the agricultural labourer.

CHAPTER III.

THE EFFECT.

THE general effect of the economic events described in the last chapter on the prices of agricultural produce was shown in chart I. on page 23, which is based on the movement of the index figure for agricultural commodities, prepared by the Ministry of Agriculture and Fisheries. Split up into the component parts this movement is shown in respect of various agricultural commodities separately in Table I. in the Appendix, giving the rise and fall of the price index of each commodity year by year from 1914 to 1922 compared with the average of 1911-13, and in Table II. giving the movement month by month during the critical period from January, 1920, to September, 1923.

The general form of the curves shown in the diagram is due, as we now know, primarily to the influence of monetary events. When, however, the changes in price of the individual products are examined, it must be borne in mind that the course of the price movement of each of these was liable to be affected not only by the monetary influences common to them all, but also by the following—

(*a*) influences arising out of demand or supply for the particular commodities, i.e. high yields, poor quality, increase or decrease in imports, etc., and

(*b*) Government control of prices.

The course of the price movements for individual commodities, shown in the first two tables in the Appendix, differs from the common form for agricultural produce to a greater or less degree accordingly as they are affected by (*a*) or (*b*) above or by both together.

A careful examination of Table I. in the Appendix shows that the prices of all these commodities were altered primarily in consequence of the general depreciation and subsequent appreciation in the value of money, the figures showing a relatively slow rise in each case from 1914 to 1920 followed by a relatively rapid fall; the downward "bend" occurring in several individual cases in 1917 is due to the establishment of Government control over prices. As regards the commodities shown on this table, in the cases of fruit, vegetables, peas and beans, and eggs, shortage of supplies due to poor crops, decrease in imports and absence of control caused the exceptionally rapid rise during 1917 and 1918 indicated in the table. In these cases the subsequent establishment of control during 1918 or 1919 caused prices to fall—and the decline is shown in their sharp downward movement. During 1920 and beginning of 1921 the majority of agricultural produce was de-controlled, and since that time has been sold in comparatively free markets.

Just as agricultural produce rose and fell in price during these years, so also did the farmer's costs of production. Agricultural requisites such as fertilisers and feeding stuffs, and such essential costs as labour and transport, alike rose between 1914 and 1920 and fell between 1920 and 1922. But these movements did not exactly coincide; produce prices on the one hand tended to rise first and to fall first, while the corresponding movement for farm requisites and services on the

other hand, tended to lag behind. Generally speaking, it is true to say that the disharmony between these two groups of price movements broadly represents the financial effect to the farmer, of the economic upheaval of 1914-22.

Although it would be very difficult, if not impossible, to obtain any exact comparison between the prices of agricultural products and the cost of production during this period, it is possible to draw certain conclusions from a study of the general movement of the prices of farm products, compared with the corresponding movements in the cost of those factors upon which their production depends. Charts II. to XIII. compare the movement in prices of certain agricultural produce, with the corresponding movements in prices or costs of certain agricultural requisites and services.[1] Some observations should be made, however, in regard to the curves shown in these charts. It should be noted that the analysis of the price movements given below is of a purely qualitative character ; certain typical cases only have been selected for the purposes of comparison. Moreover, no account has been taken of the variation in such permanent charges as rents, without which the picture is necessarily incomplete. The curve shown for *rates* is based in figures published by the Ministry of Health, giving the percentage increase as compared with 1913-14 in "typical rural parishes."[2] The curve has been included

[1] These diagrams are based exclusively on statistical data relating to agriculture in the United Kingdom. They also indicate the *general character* of the agricultural price movement in the United States, which was closely similar to our own.

[2] Statement, showing for each Borough and other Urban District in England and Wales, and for 100 typical rural parishes, the amount of the local rates per £ of assessable value, 1923.

because rates have frequently been referred to in discussions on the cost of farming during and since the war. It must be remembered, however, that, at most, they form a relatively small proportion of the farmer's costs. Special mention must also be made of the curve representing the cost of horse maintenance shown in charts XII. and XIII. There are no figures available for this which would be applicable to the whole country, and the movements here shown are based on figures collected by the Agricultural Department of Leeds University in respect of some fifty farms in Yorkshire and have been obtained through the kindness of Dr. A. G. Ruston. They give the annual average variation in the percentage increase over pre-war (average of 1911 to 1913) of the cost of horse maintenance. The curve here given represents "horse maintenance" rather than "horse labour" for the reason that in the fifty farms on which these figures are based there has been during the last few years a steady diminution in the number of days worked by farm horses per annum. There appears, however, to be no means of ascertaining whether this has been general in other parts of the country, or whether it has taken place in the same degree as in the fifty farms. A curve representing the increased cost of horse labour *per diem*, based on figures from these farms would, however, show a steeper upward gradient in the earlier years and a less rapid fall in the later years, than the curve here given for horse maintenance. While therefore the latter curve is not based on figures for the whole country, and consequently cannot be taken as accurately representing the conditions in the whole country, it may be sufficient to give a general indication of the change which has occurred in this item of agricultural costs.

In regard to rail transport, the curve given in the diagrams represents the percentage increase in railway rates above pre-war rates. The alteration of railway rates has, however, in all cases, involved, in addition to the percentage increases above pre-war rates, a certain flat rate varying from 3d. per ton to 1s. per ton irrespective of the distance over which the goods are conveyed. It is impossible to express exactly the effect of these flat rates in terms of percentage increase above pre-war, but it seems probable that if they were included the result would be to raise the figures here given by between 2 and 5 per cent.

A further point should be noted as regards wages. The curve for wages given on these diagrams is based on decisions of the Agricultural Wages Board, and no accurate data are available to show the movement in the general level of agricultural wages prior to 1918, though it would seem probable that the wages curve from 1914 and 1918 would have shown little rise till the end of 1915, and thereafter a gradual rise to the point reached in 1918. After the abolition of the Wages Board in October, 1921, the rates of wages were settled by the Conciliation Committees, and the index figure is therefore based on the agreements reached by these Committees.

Charts II. and III. show the increase in prices for wheat and barley as compared with the costs of labour, rural rates, transport, and sulphate of ammonia.[1] It will be observed that the increase in price of sulphate of ammonia over the whole period was less than either that

[1] Oats has been omitted from this diagram for the sake of clearness, the curve for oats follows much the same course as that of barley.

CHART II.—Percentage increase in the price of Wheat and Barley, and in the cost of Labour, Rail Transport, Sulphate of Ammonia, and Rural Rates for the years 1914 to 1922, compared with the average of 1911 to 1913.

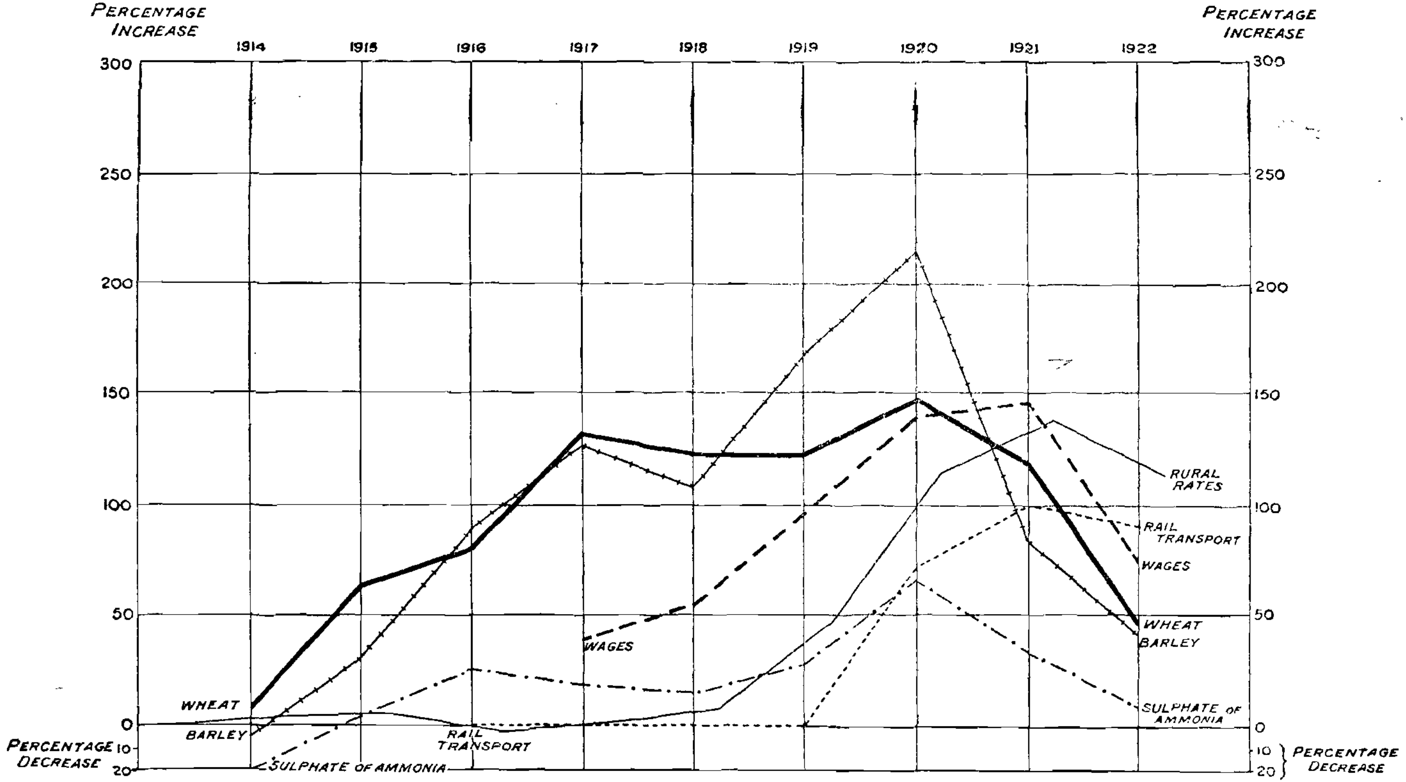
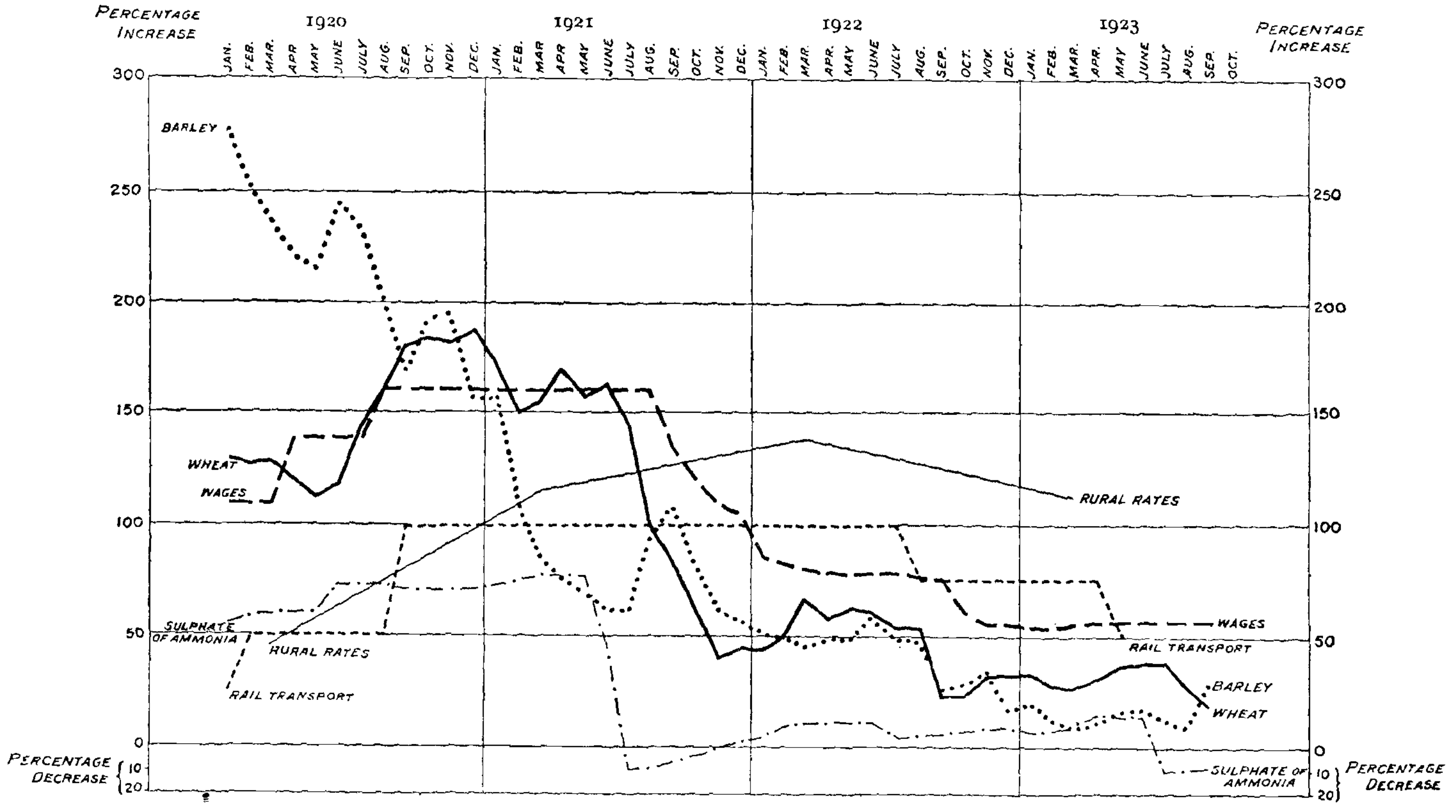


CHART III.—Percentage increase in the price of Wheat and Barley, and in the cost of Labour, Rail Transport, Sulphate of Ammonia, and Rural Rates for each month from January, 1920, to September, 1923, compared with the average of the corresponding months of 1911 to 1913.



of wheat or barley, so that as regards this commodity the farmer was always in a relatively better position than before the war. In the case of labour, however, which forms a much higher proportion of the total cost of wheat raising, the position is different. Up to 1920 the increase in labour costs was less than the corresponding increase in the price of grain. The curve for wages crosses those of wheat and barley during 1920, and during the whole of 1921 and 1922 the increase in the cost of labour above the pre-war standard was much more than the increase in the price of grain. Moreover, it must not be overlooked that a large proportion of the labour costs are incurred, roughly speaking, *up to a year before the grain is sold*, and so far as this is the case, the wages curve for the *preceding* year represents the relative cost of labour for the grain sold at any point on the grain curves, and the vertical distance between the respective points on these curves is a measure of the farmer's loss consequent upon the relatively higher level of wages. Thus in January, 1922, when the price of wheat was approximately 44 per cent. over pre-war, the cost of the labour employed during the raising of this wheat was somewhere between 86 and 160 per cent. above pre-war. On the other hand, in 1920 when the average price of wheat was 147 per cent. above pre-war, the corresponding cost of labour was somewhere between 96 per cent. and 140 per cent. above pre-war.

The comparison of the wheat and barley curves with that of wages shown on chart III. indicates that the farmer suffered in the critical years of 1921 and 1922—

1. By reason of the exceptionally long period of turnover (compared with other trades)—which is an essential condition of the agricultural industry.

2. From the "lag" in the downward movement of wages behind that of grain prices.

The same thing applies in differing degrees in respect of rail transport, since transport costs, besides being incurred in respect of the crop itself after harvest, are also incurred in regard to farm requisites purchased many months earlier. It should be noted, however, that the upward movement of rail transport costs was relatively much slower than that of grain prices in the earlier years, and until 1921 the farmer was, in respect of the cost of this service, in a substantially better position than before the war. Mention should also be made of the cost of seed, a further item in the cost of production, which is roughly indicated by the curves for wheat and barley respectively at the corresponding points in the previous year.

Taking the curves shown on charts II. and III. as a whole, they indicate that the relative movements of wheat and barley prices on the one hand in relation to the costs of production here represented on the other hand, were wholly to the advantage of the farmer up to 1920, that the relation between these two sets of curves was inverted during 1921 and that the relative disadvantage consequently suffered by the farmer, as measured by the vertical distance between the "produce" curves and "cost" curves, was greatest during the latter part of 1921 and 1922.

What is true in the case of grain, is shown in the diagrams which follow to be true in a greater or less degree in the cases of other agricultural produce. Charts IV. and V. compare the movement of potato prices with the corresponding costs of labour, transport, and superphosphate, but in this case the loss due to monetary

CHART IV.—Percentage increase in the price of Potatoes and certain costs of production, 1914 to 1922, compared with the average of 1911 to 1913.

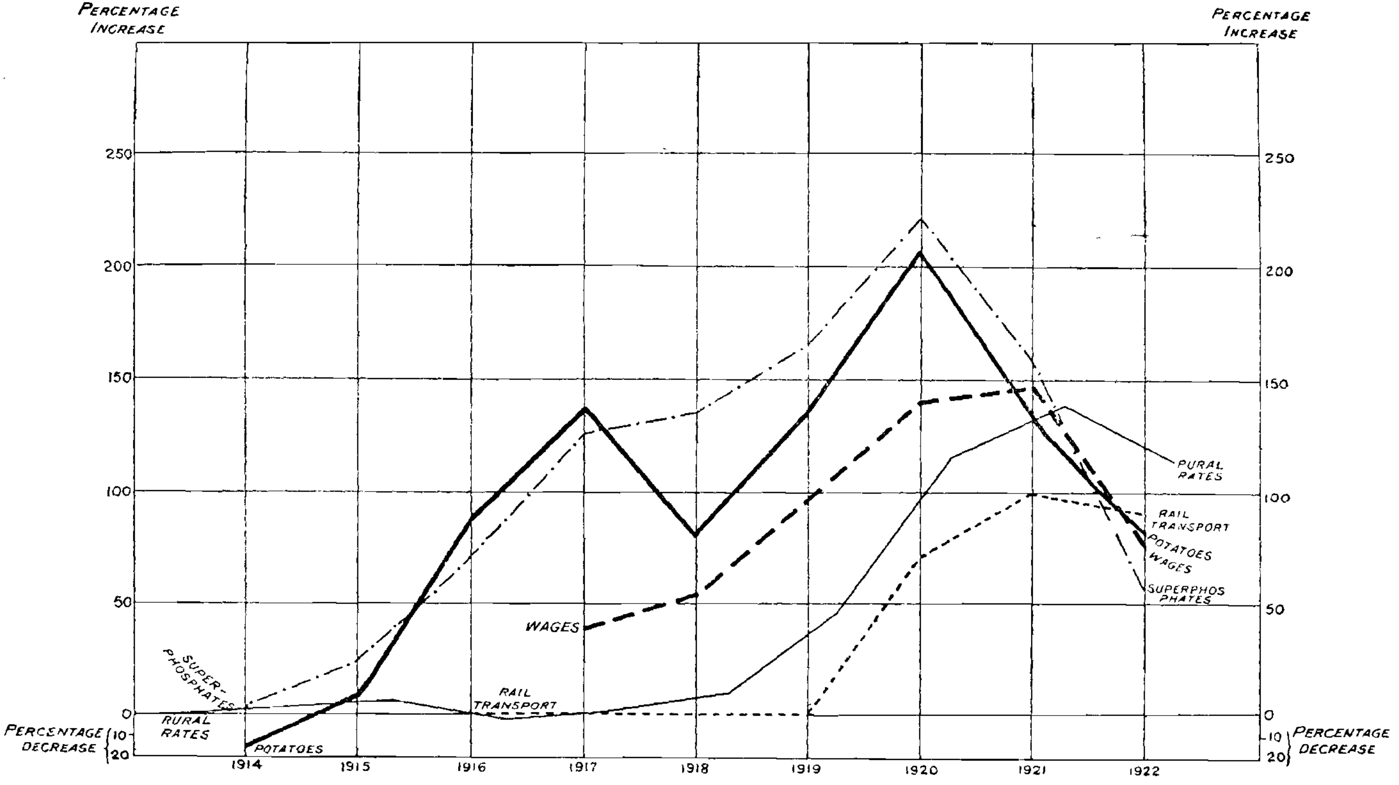


CHART V.—Percentage increase in the price of Potatoes and certain costs of production from January, 1920, to September, 1923, compared with the average of the corresponding months in 1911 to 1913.

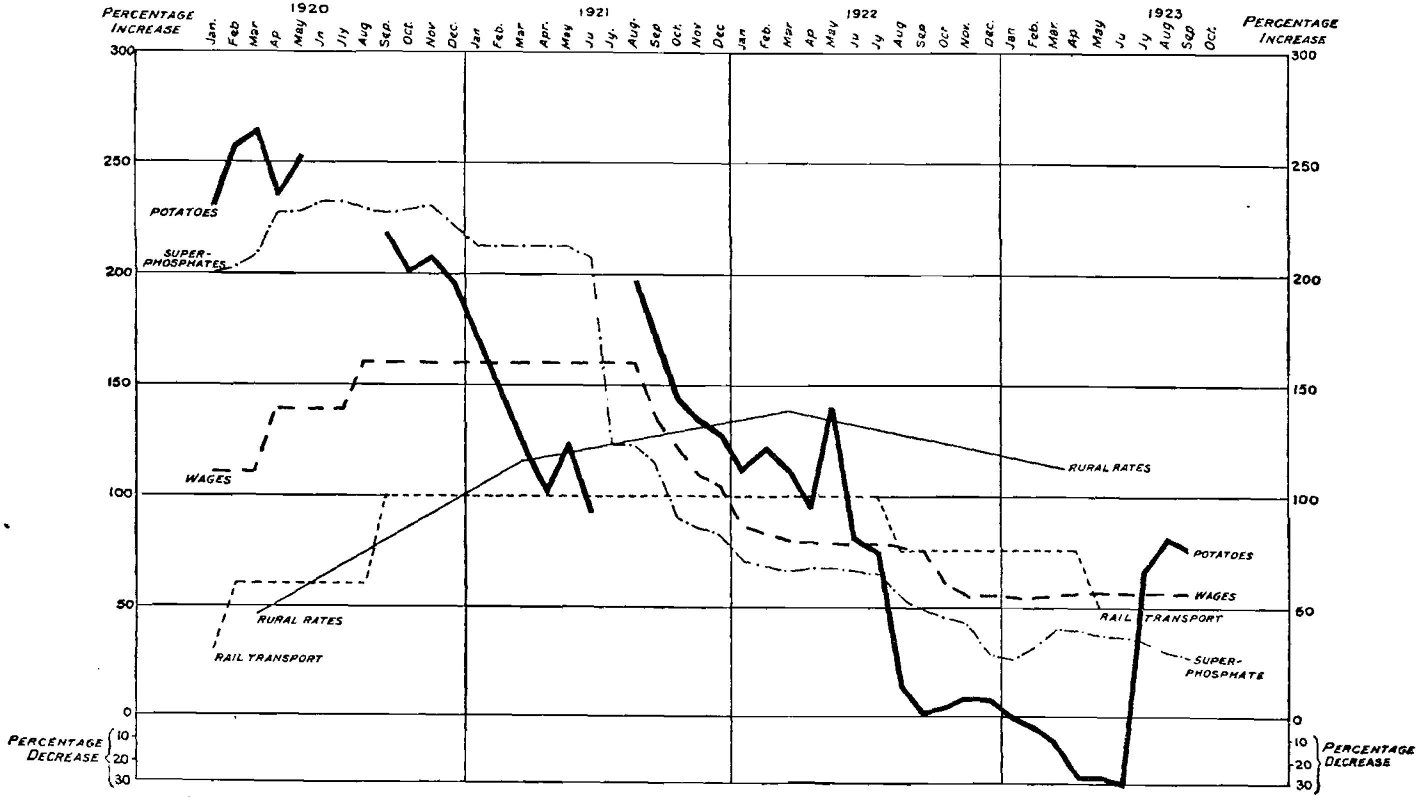


CHART VI.—Percentage increase in the price of Hay and certain costs of production, 1914 to 1922, compared with the average of 1911 to 1913.

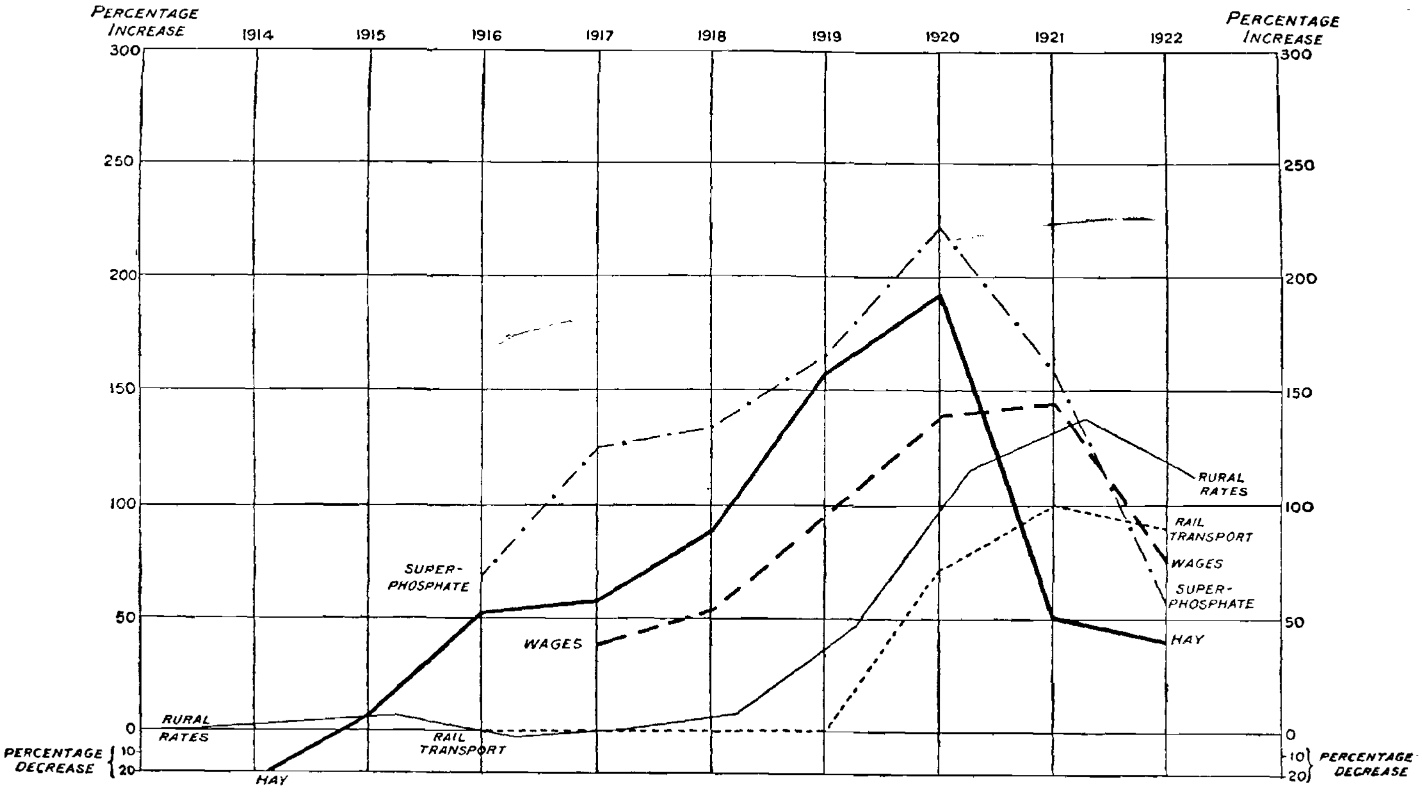
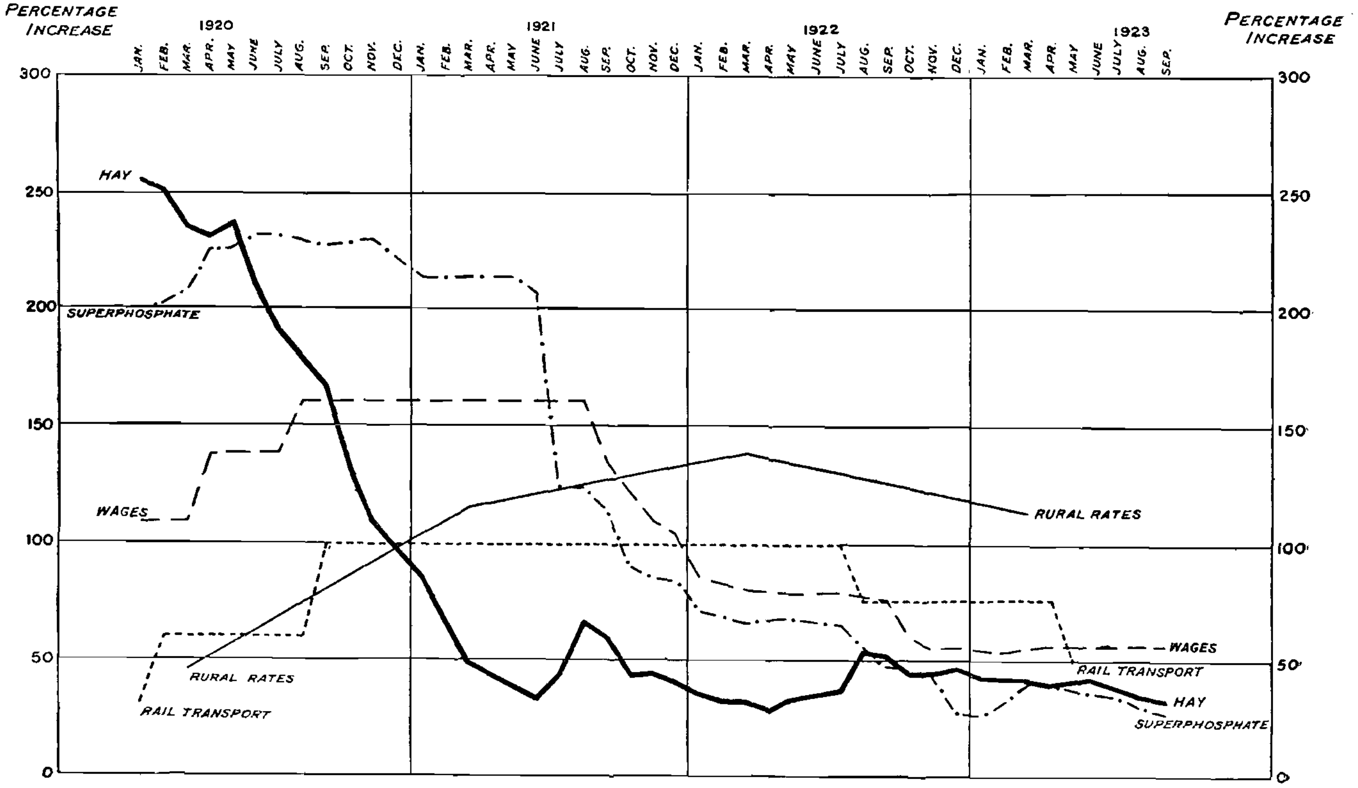


CHART VII.—Percentage increase in the price of Hay and certain costs of production, from January, 1920, to September, 1923, compared with the average of the corresponding months in 1911 to 1913.

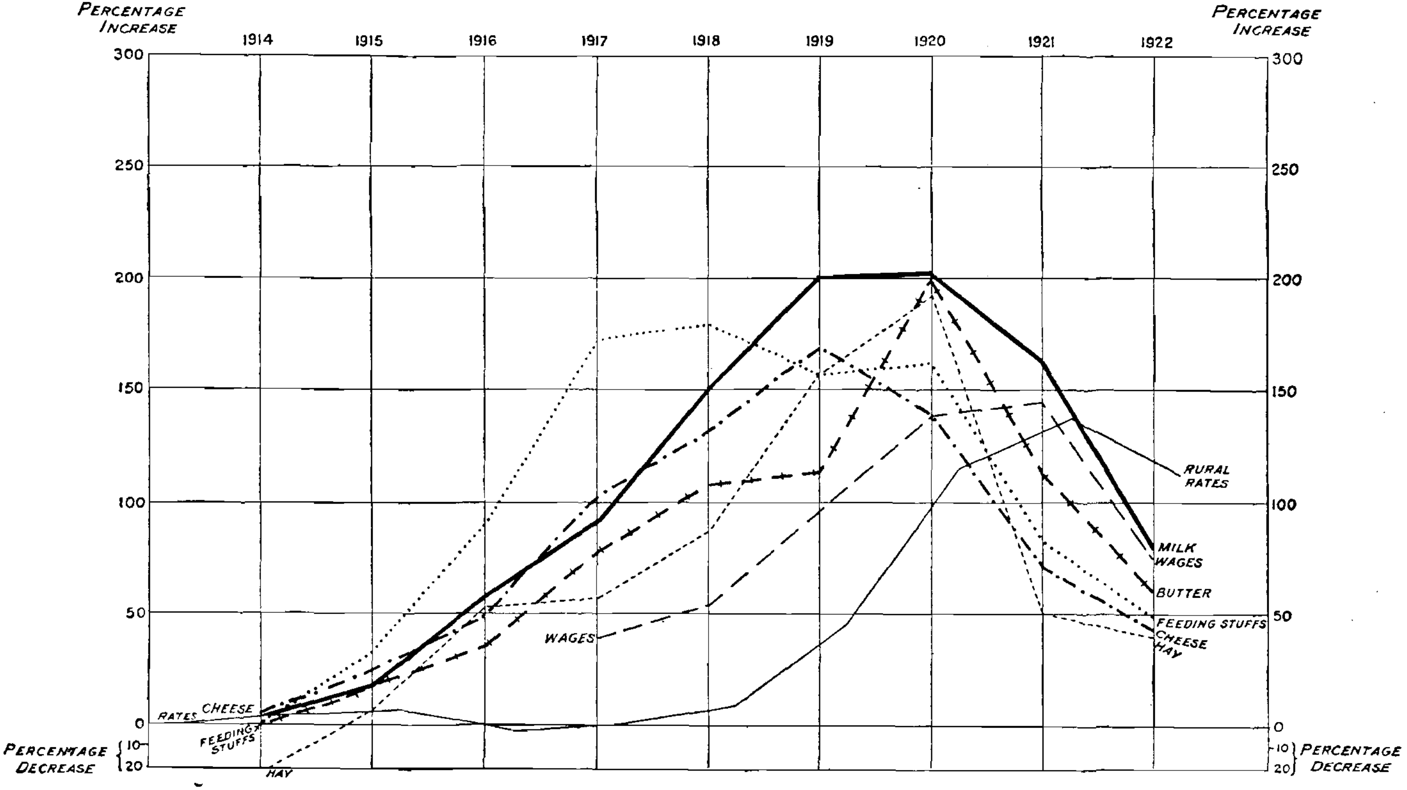


causes was still further aggravated by the slump in the potato prices in the latter part of 1922 in consequence of the exceptionally large crop. It was perhaps the most conspicuous example amongst agricultural products, of how abundance of supplies added its effect to that of the alteration in the value of money, and thus aggravated the fall in price. The charts show that as regards the principal items of costs—wages, transport, and superphosphate—potato prices remained relatively higher during the earlier years, and not until the middle of 1922 did this curve fall definitely below the "costs" curves. The critical period as regards potatoes came, therefore, later than in the case of grain, but its disastrous character is shown by the course of the curves given on the diagram from June, 1922, onwards.

In comparison with potatoes, the curve of hay prices shown in charts VI. and VII. reached the critical point at a much earlier date crossing all the curves of costs here given, before the end of 1920, and has remained below, generally speaking, till the end of the period under review. The effect of the fall in price in comparison with the corresponding movements of costs shown on these diagrams was greatest in 1921, during which year, while the average price of hay was only 51 per cent. above pre-war, that of labour was 146 per cent., superphosphate 158 per cent., and rail transport 100 per cent. above pre-war. In the case both of potatoes and hay, the relatively high cost of superphosphate is noteworthy.

As regards charts VIII. and IX. representing the prices of dairy produce, and X. and XI. representing meat prices, a somewhat different state of affairs is shown. The average price of feeding stuffs (the most important of the "costs" curves) rose more rapidly in the earlier

CHART VIII.—Percentage increase in the price of Milk, Butter, and Cheese and in certain costs of production, 1914 to 1922, compared with the average of 1911 to 1913.



years and declined more rapidly in the later years than in the case of milk, cheese, butter, or meat. During the whole of the critical period of 1921 and 1922 on the other hand, farmers had the advantage of being able to purchase feeding stuffs at prices which in comparison with the prices of animal products were relatively cheaper than before the war. In this respect the curve for the average increase in price of feeding stuffs is unique amongst the "costs" referred to in this chapter. As regards the other costs the curves for labour and transport are in much the same relation to the "produce" curves, as in the cases of wheat and barley dealt with above.

The price movements shown on charts VIII. to XI. when compared with the corresponding diagrams for grain, potatoes, and hay, throw some light on the relative costs of arable and pasture farming during the period under review. Although the fall in wages lagged behind the fall in meat prices, it would seem that pasture farming suffered less in this respect than arable farming, and on the whole less in respect of the other important items in the cost of production which are here dealt with.

A very superficial examination of these charts reveals the essential similarity in form—the upward rise during the period of monetary inflation, the peak reached sometime in 1920, and the downward movement during the period of deflation. Their divergence from this common form reveals the influence of price "control" and other factors specifically affecting the price of individual products.

Charts XII. and XIII. summarise the position in regard to the movement of the prices of agricultural produce as a whole in comparison with labour, rail transport,

CHART IX.—Percentage increase in the price of Milk, Butter, and Cheese and certain costs of production, from January, 1920, to September, 1923, compared with the average of the corresponding months, 1911 to 1913.

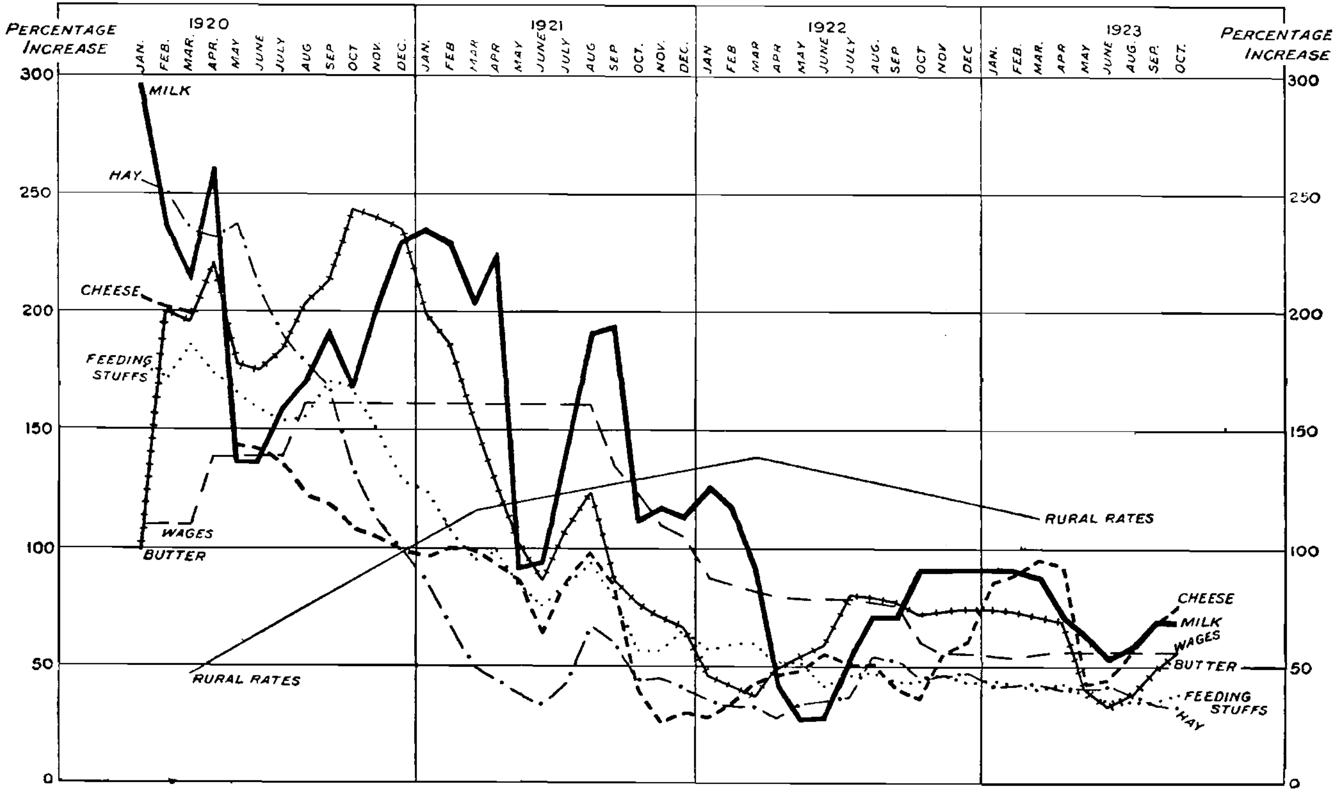


CHART X.—Percentage increase in the price of Beef and Mutton and certain costs of production, 1914 to 1922, compared with the average of 1911 to 1913.

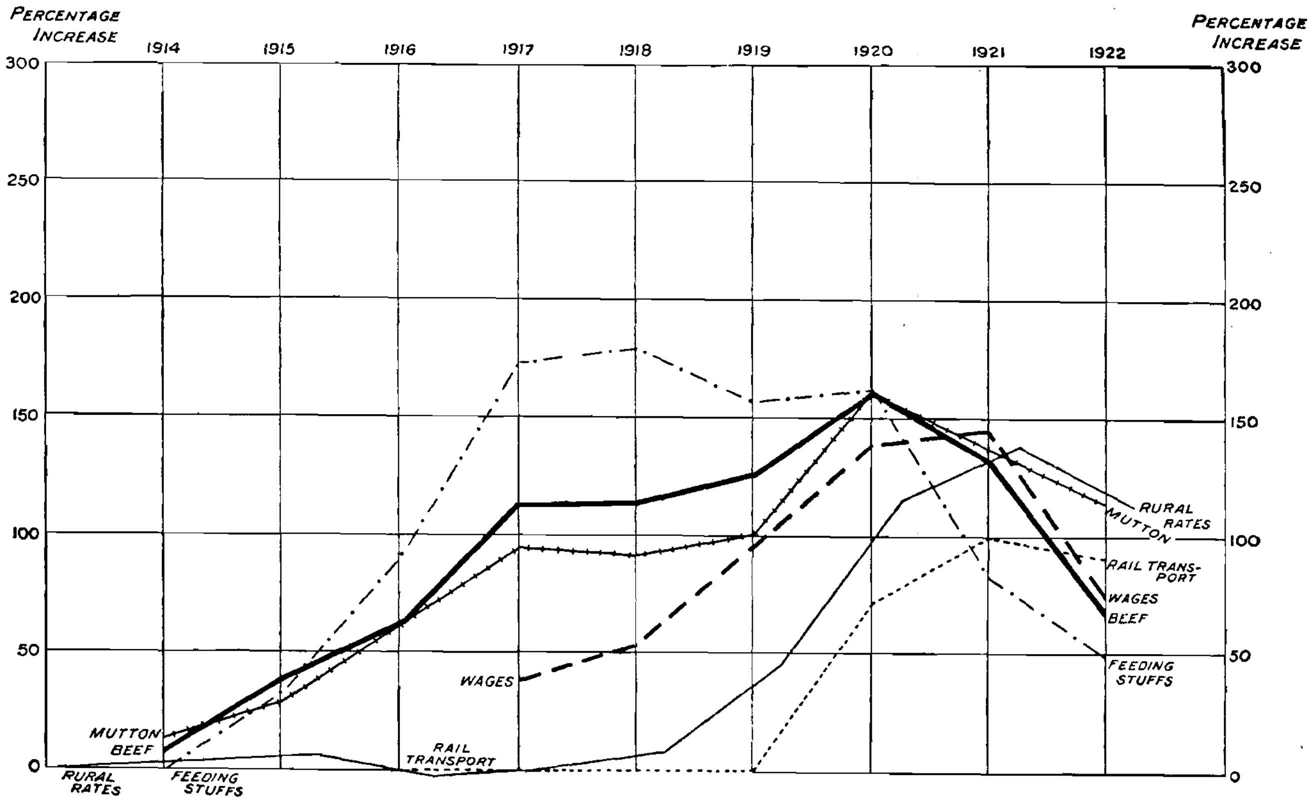
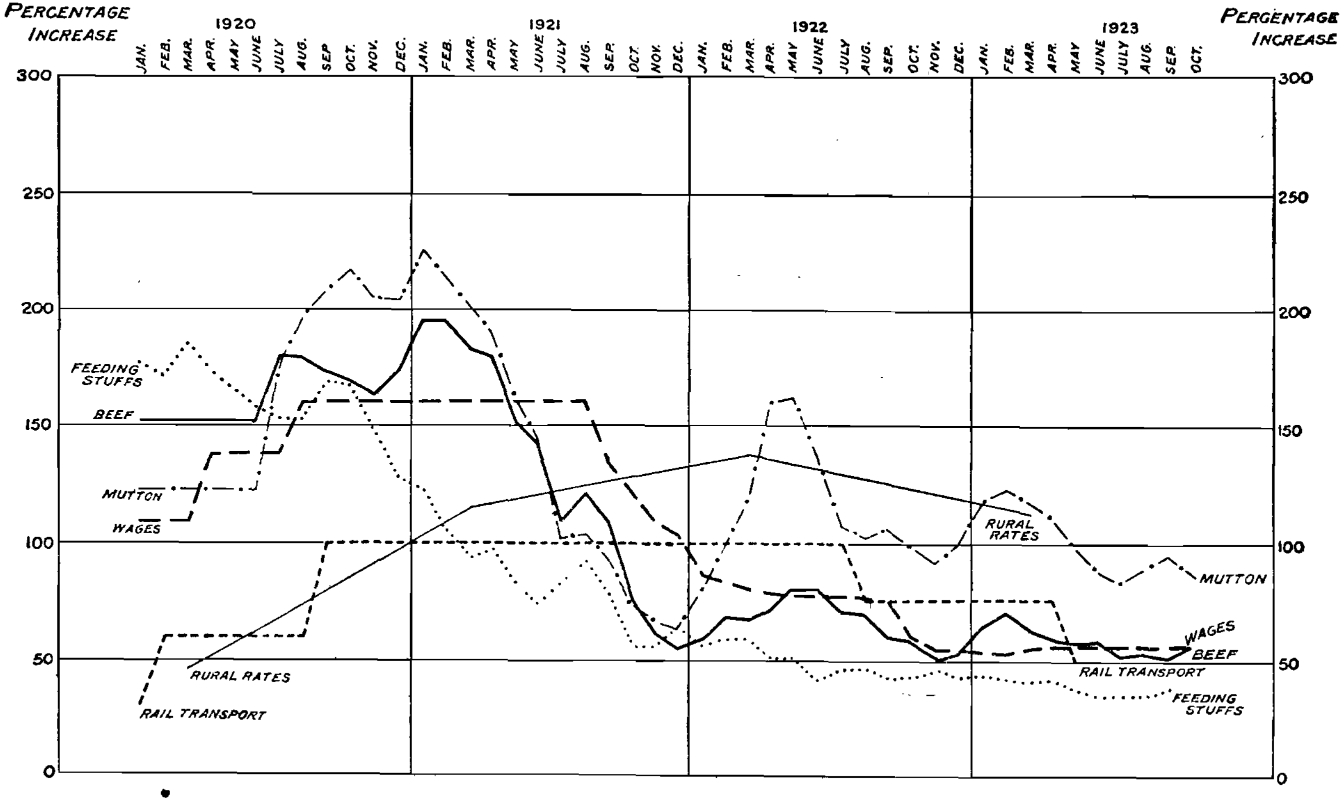


CHART XI.—Percentage increase in the price of Beef and Mutton and certain costs of production from January, 1920, to September, 1923, compared with the average of the corresponding months, 1911 to 1913.



horse maintenance, rural rates, fertilisers, and feeding stuffs. During the whole of the upward movement, the prices of agricultural produce were at a relatively higher level than those of any of these services, or costs, with the exception of feeding stuffs.[1] These conditions began to be reversed early in 1921, the level of wages remaining at its highest point until almost a year after the general fall in the prices of agricultural produce had begun. When account is also taken of the long period of turnover to which reference has already been made, the very severe effect of the relatively high cost of labour in respect of agricultural produce sold during 1921 and 1922 may readily be judged, indeed so far as the price movements here shown are concerned, this would seem to be the principal cause of loss during the period of falling prices.

It is not without interest to observe the effect of the variation in railway rates on the cost of agricultural produce, particularly because high railway rates have been spoken of as one of the chief of the farmer's difficulties. The relative advantage to the farmer of the very slow upward movement of railway rates is manifest from chart XII., and the net result over the whole period has evidently been to his advantage.

There remains to be considered the relation between the movement of agricultural prices, and that of general wholesale prices. Has the fall in agricultural prices been greater or less than that of all commodities, and has the agricultural crisis of 1920-23 been aggravated or lessened thereby?

[1] The exceptionally high price of feeding stuffs was due to restriction of imports during the war period.

CHART XII.—Percentage increase in the price of all Agricultural Produce and certain costs of production, 1914 to 1922, compared with the average of 1911 to 1913.

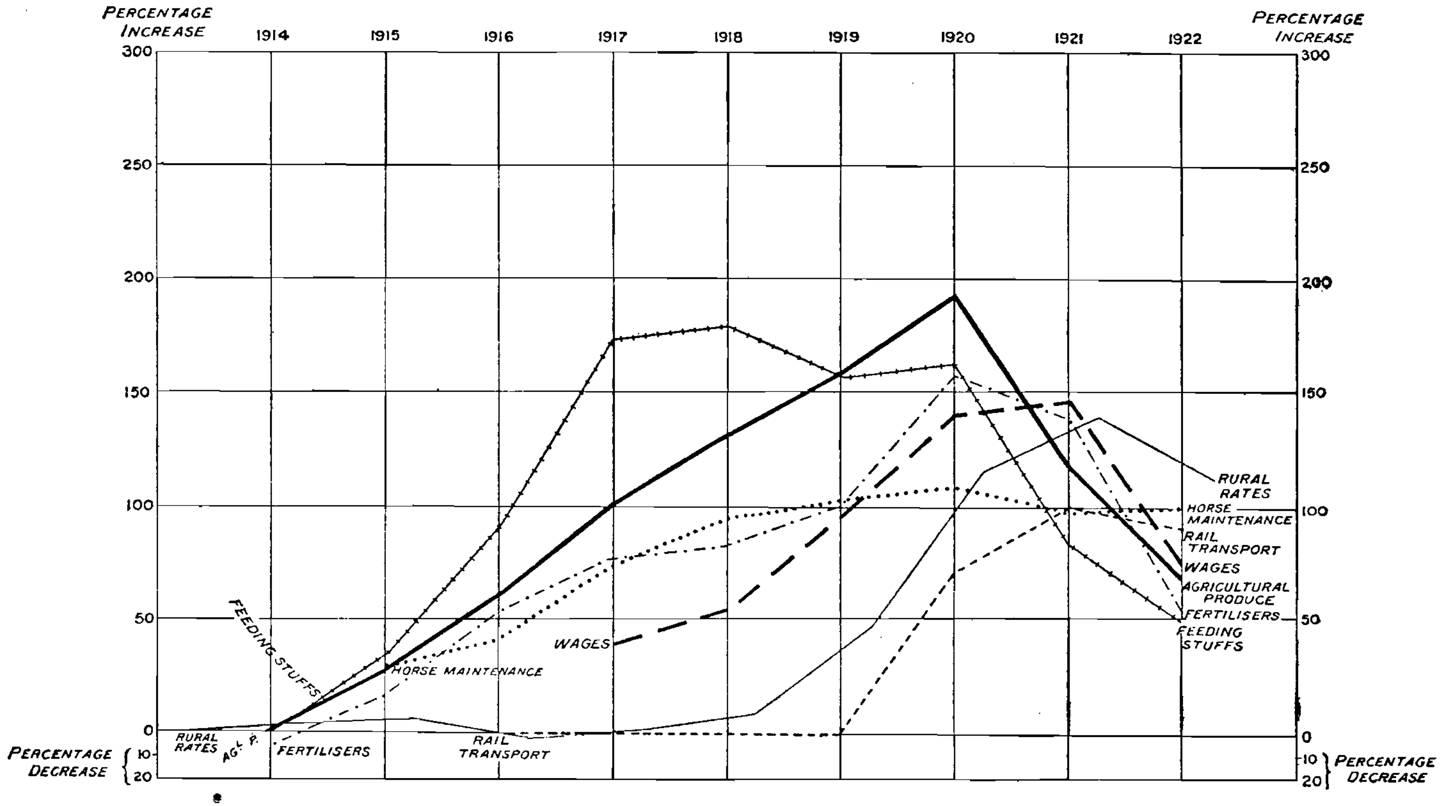
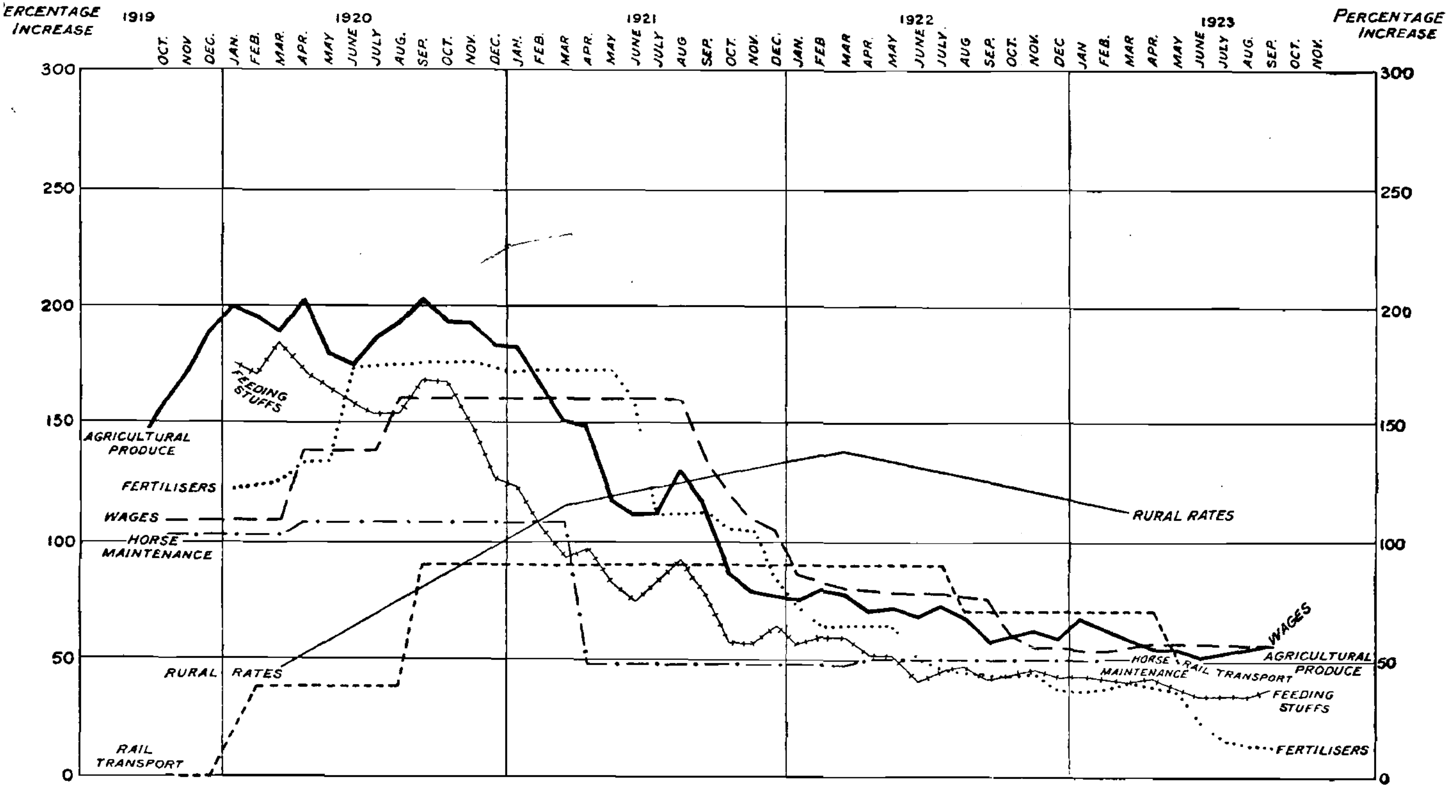


CHART XIII.—Percentage increase in the price of all Agricultural Produce and certain costs of production, January, 1920, to September, 1923, compared with the average of the corresponding months, 1911 to 1913.



Charts XIV. and XV. compare the movement of agricultural prices with those of—

1. All commodities.
2. All commodities other than food.

The figures for wholesale prices have been obtained from those published by the "Statist" (Sauerbeck's figures), recalculated on the basis of the average of 1911-13 so as to bring them into line with the index figures for agricultural prices, and are set out in the following table for the years 1914 to 1922 :—

TABLE V.

Percentage Increase in Price above the Average of 1911-13, *of Agricultural Produce compared with Wholesale Commodities.*

Year.	Agricultural Produce.	Wholesale Commodities.	Wholesale Commodities Other than Food.
1914	1	2	1
1915	27	30	24
1916	60	63	60
1917	101	110	105
1918	132	130	136
1919	158	147	154
1920	192	201	202
1921	119	86	75
1922	69	57	51

In Table VI. (page 95) are given the corresponding figures for each month from January, 1920, to October, 1923, calculated on the same basis.

CHART XIV.—Percentage increase in the prices of Agricultural Produce, of Wholesale Commodities, and Wholesale Commodities other than Food, 1914 to 1922, compared with the average of 1911 to 1913.

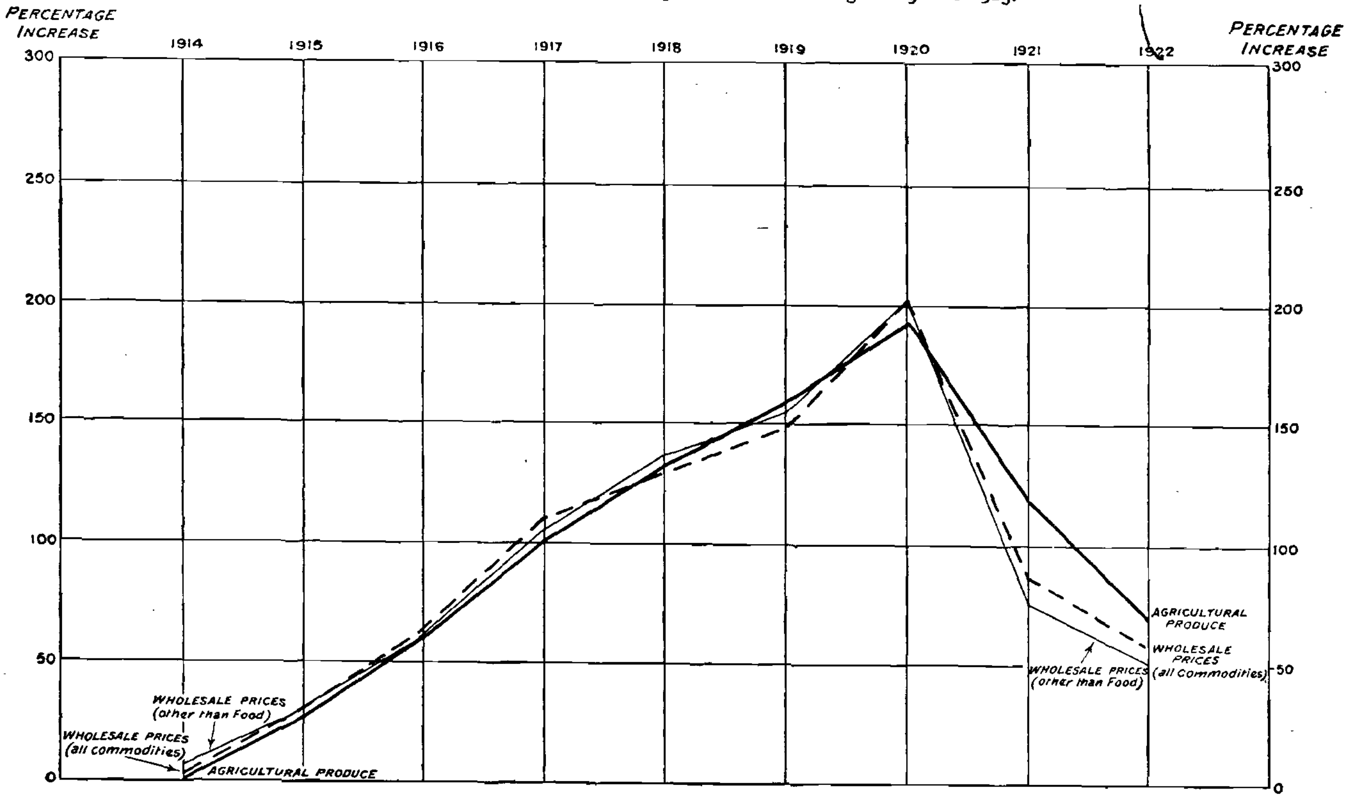


CHART XV.—Percentage increase in the prices of Agricultural Produce, of Wholesale Commodities, and Wholesale Commodities other than Food, from January, 1920, to September, 1923, compared with the average of the years 1911 to 1913.

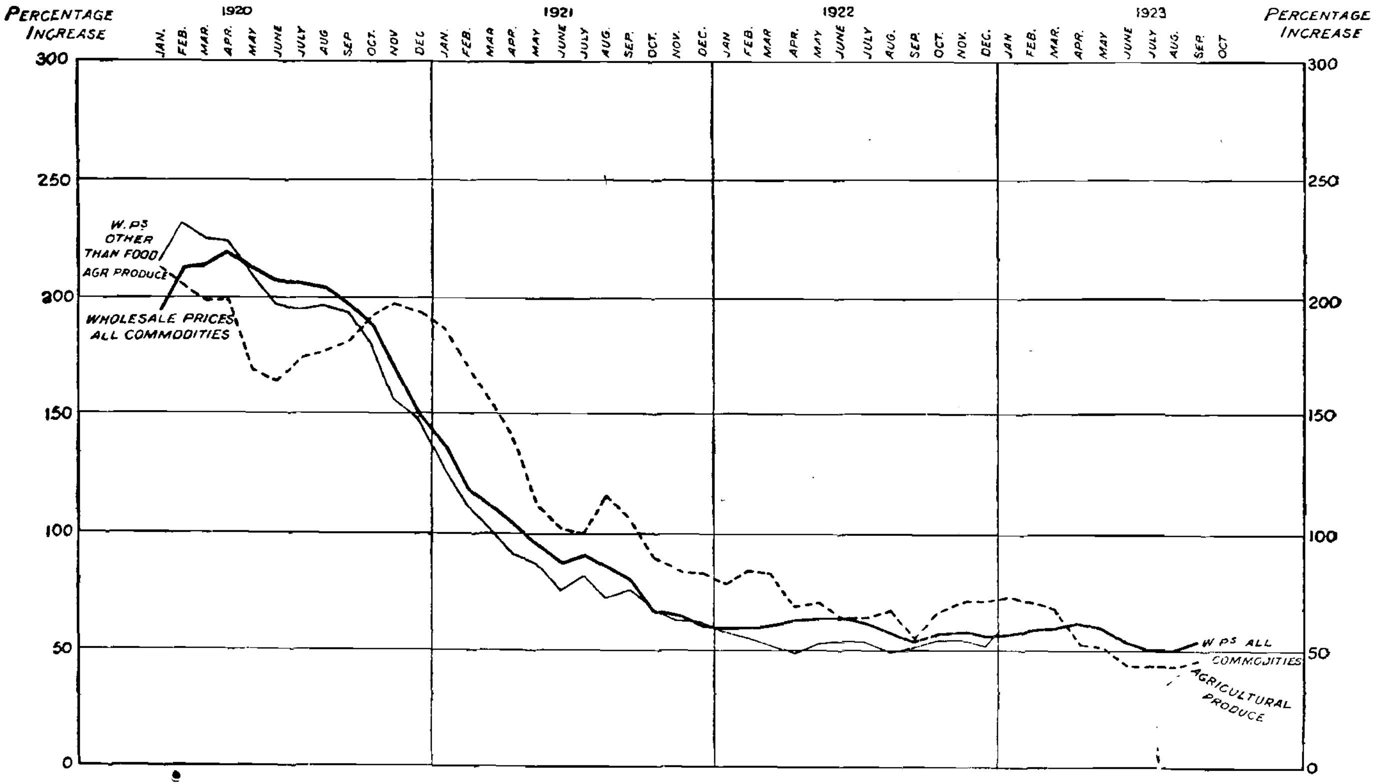


TABLE VI.

Percentage Increase in Price above the Average of 1911-13, *of Agricultural Produce compared with Wholesale Commodities and Wholesale Commodities other than Food.*

	Agricultural Produce.	Wholesale Commodities.	Wholesale Commodities Other than Food.
January, 1920 . .	213	194	215
February . . .	205	212	231
March	199	214	225
April	199	219	224
May	169	212	210
June	164	207	197
July	174	206	195
August . . .	177	204	196
September . . .	181	198	194
October . . .	191	188	180
November . . .	197	169	155
December . . .	194	149	147
January, 1921 . .	186	137	128
February . . .	172	120	112
March	158	113	101
April	141	104	91
May	112	95	86
June	102	87	75
July	100	90	81
August . . .	116	85	71
September . . .	105	79	75
October . . .	90	66	66
November . . .	84	64	62
December . . .	82	60	61
January, 1922 . .	77	59	58
February . . .	83	59	55
March	82	60	52
April	68	62	49
May	70	63	53
June	63	63	54
July	63	61	53
August . . .	64	56	50
September . . .	54	53	51
October . . .	66	56	54
November . . .	70	57	54
December . . .	70	55	51
January, 1923 . .	72	56	54
February . . .	70	58	56
March	67	59	57
April	53	61	59
May	51	59	57
June	44	53	54
July	44	50	47
August . . .	44	50	47
September . . .	46	53	51
October . . .	54	53	53

It will be observed from the second of these two diagrams that the fall in the prices of general commodities was more rapid during 1920 than was the case with agricultural prices, and that during the whole of the subsequent period until April, 1923, the level of agricultural prices has been above that of commodity prices. A fall in the price of milk and eggs in the spring of 1923, followed by a still further fall in corn prices in the autumn of that year, were the more important causes of the depression of the index figure for agricultural prices below that of general commodity prices.

It is possible from these figures to obtain an index of what we may call "the purchasing power of agricultural produce." If agricultural commodities generally fell in price more slowly than other commodities, then the power of agricultural produce to buy other commodities became relatively greater, other commodities in relation to the pre-war standard of purchasing power being relatively cheaper, in terms of agricultural produce.

The purchasing power of agricultural produce at any particular date expressed in terms of wholesale commodities, may be obtained by dividing the index figure for the former at that date, by the index figure for wholesale commodities. This has been done for each of the years 1916-22, and each of the months January, 1920, to December, 1922, as shown in the following tables, and the results are represented graphically in the charts XVI. and XVII., showing the percentage increase or decrease in the purchasing power of agricultural produce in terms—

(*a*) of all wholesale commodities,

(*b*) of wholesale commodities other than food, the pre-war base being taken as zero.

TABLE VII.

Purchasing Power of Agricultural Produce in Terms of Wholesale Commodities, and in Terms of Wholesale Commodities other than Food. (Average of 1911-13 = 100.) 1914-22.

Year.	Wholesale Commodities.	Wholesale Commodities other than Food.
1914	99	100
1915	98	102
1916	98	100
1917	96	98
1918	101	98
1919	104	102
1920	97	97
1921	118	125
1922	108	112

TABLE VIII.

Purchasing Power of Agricultural Produce in Terms of Wholesale Commodities, and in Terms of Wholesale Commodities other than Food. (Average of 1911-13 = 100.) *January,* 1920, *to December,* 1922.

Month.	1920. Wholesale Commodities.	1920. Wholesale Commodities other than Food.	1921. Wholesale Commodities.	1921. Wholesale Commodities other than Food.	1922. Wholesale Commodities.	1922. Wholesale Commodities other than Food.	1923. Wholesale Commodities.	1923. Wholesale Commodities other than Food.
January	106	99	121	125	111	112	110	112
February	98	92	124	128	115	118	108	109
March	95	92	121	128	114	120	105	106
April	94	92	118	126	104	113	95	96
May	86	87	109	114	104	111	95	96
June	86	89	108	115	100	106	94	94
July	90	93	105	110	101	107	96	98
August	91	94	117	126	106	111	96	98
September	94	96	115	117	101	102	95	97
October	101	104	114	114	106	108		
November	110	116	112	114	108	110		
December	118	119	114	113	110	113		

These tables and the curves in charts XVI. and XVII. bring out the fact that coincident with the beginning of the general fall in prices in 1920, the purchasing power of farm produce began to rise, reaching in February, 1921, a point 24 per cent. or 28 per cent. above par according to which basis is taken, and remaining above par throughout the whole period of declining prices, until the spring of 1923.

The preceding pages, together with the tables and diagrams which accompany them, give a short review of the effect on agriculture of the conditions which were analysed in Chapter II., judged from the point of view of the farmer's pocket. This is not the only point of view, but it is an important one, and one which, with the aid of the statistical data here given, may be examined with a better sense of proportion than has, perhaps, sometimes been done.

These charts establish in an unmistakable manner the effect of depreciation or appreciation in the value of money upon the business of farming, and their evidence compels us to the obvious conclusion. In a period in which the purchasing power of money is continually altering, the economic conditions of the industry must be upset; agriculture becomes (so to speak) economically diseased, and the only cure for the disease is to remove the cause. Successful agriculture fundamentally rests on a fairly stable price level. When, as in 1920 and 1921, the price level is rapidly falling, the industry is immediately confronted with overwhelming difficulties; for it is not so much low prices as *falling* prices which bring about an economic crisis.

It has been pointed out often enough during the

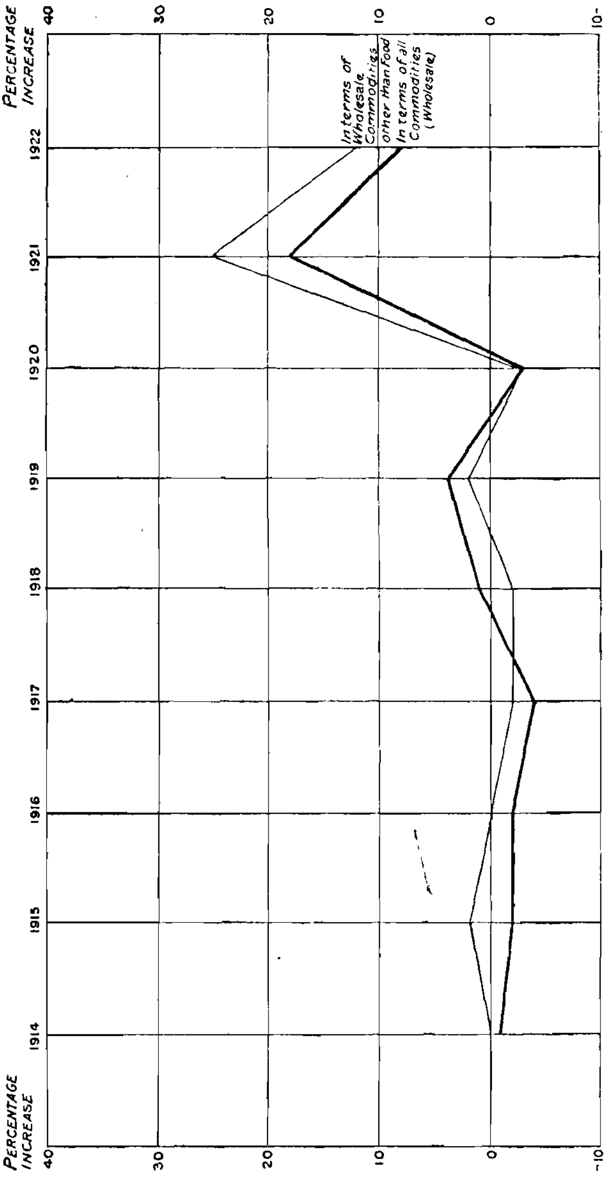
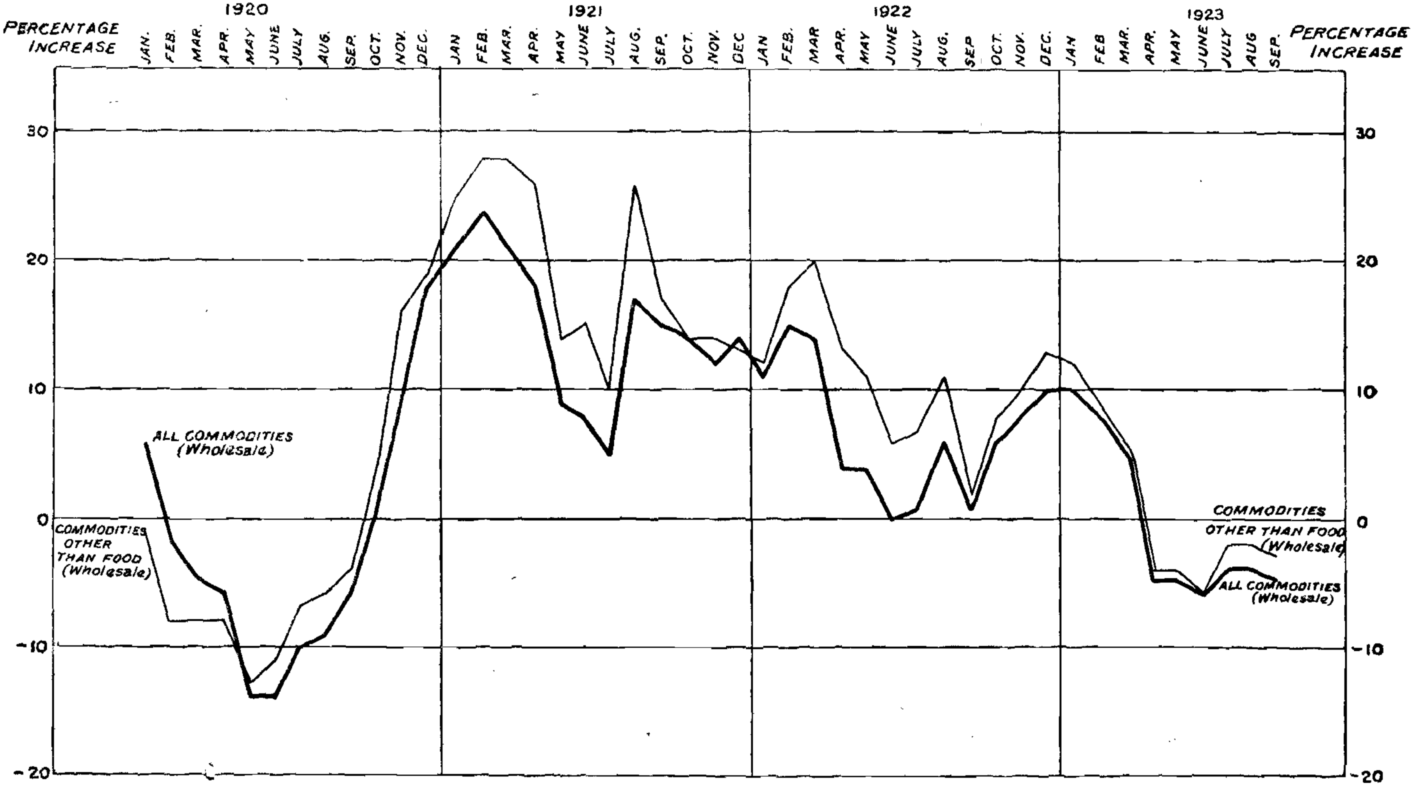


CHART XVI.—Percentage increase or decrease in Purchasing Power of Agricultural Produce in terms of (1) Wholesale Commodities, and (2) Wholesale Commodities other than Food, 1914 to 1922. (Average of 1911 to 1913 = 0.)

CHART XVII.—Percentage increase or decrease in Purchasing Power of Agricultural Produce in terms of (1) Wholesale Commodities and (2) Wholesale Commodities other than Food, January, 1920, to September, 1923. (Average of 1911 to 1913 = 0.)



last three years how high wages, high transport costs and the like, have prevented the farmer from carrying on his operations at a profit, but to state the case in this form is almost to mis-state it. High wages and other costs were, in the circumstances of 1921 and 1922, incidental to the process of deflation which occupied these years. In such a period wages were bound to be "high." There was no escape from it; since what might have been reasonable and within what the industry could "bear," had prices remained where they were *when the crops were sown, would inevitably have become* "high," when prices had sunk to the level reached at the time the crops were harvested. The longer the period of turnover in any industry, the greater must be its difficulties in a period of falling prices; and this long period of turnover is an unavoidable condition of agricultural enterprise, more so, perhaps, than of any other staple industry. It would only have been necessary for deflation to proceed sufficiently rapidly to rob the farmer of the whole of his profits, and to render his operations a losing business, whatever might have been the degree of technical skill he applied to them. Added to this, there is the almost inevitable occurrence of the "lag" in the movement of wages and other costs which is revealed in these charts, aggravating the effect of the fall in produce prices, and thus increasing the farmer's burden.

It is true that these conditions affect both the upward and downward price movements, and it is, therefore, possible that a critic, in answer to the farmer's lamentations, might be tempted to point to the earlier period of rising prices and large profits, and to ask, "was not this sufficient to compensate the farmer for the period

of depression which followed; what he lost on the swings did he not gain on the roundabouts?" There can be no doubt at all that the farmer's losses after 1920 were very largely met out of the profits made before 1920, and it would even seem that the curves representing the price movements of agricultural produce and costs, suggest that the net result of the upheaval of 1914-22 was a positive advantage to him, since the upward price movement was longer than the downward, and the "lag" during the former was greater. But this suggestion is hardly a fair one. To review the price movement after it has occurred, is one thing, and to be immersed in it during its occurrence, is quite another thing. As it was, he had no notion as to when the fall in prices would begin, nor, indeed, had he much idea as to why any of it happened at all. A greater knowledge of the economic structure of things might have saved him some considerable losses, but it would have taken more than the best farmer and professor of economics combined, to have accurately forecasted the course of agricultural prices in the critical years between January, 1920, and December, 1922. It is probably nearer the truth to say that it was largely owing to the accumulated profits of the war period that agriculture was able to sustain the shock of 1920-21; but for this, the crisis would have been much more severe. Moreover, who would not have preferred nine years of stable prices, instead of six years of violently rising prices, followed by three years of still more violently falling prices, with the attendant risks, perplexities, labour disputes, and other difficulties arising from such fluctuations in values? Nor must it be imagined that the bad effects of the price upheaval end when the general level of prices

becomes stable. This will be seen only too clearly in the section dealing with the special reasons which have caused the depression in corn prices to be both more severe and more protracted than in the case of other agricultural produce.

The disturbance of the relation between produce prices and costs of production was, however, by no means the only consequence of the upheaval of prices. There were other effects, hardly less important, and no less attributable to monetary causes. Mention must be made of what is sometimes called "frozen credit," because to the trader, farmer, or merchant alike, it was, perhaps, the most pernicious effect of monetary deflation. A person who contracted a loan when prices were at a high level, say at the beginning of 1920, was, in consequence of the general fall in prices and the changed conditions of trade, very soon confronted with an inability to liquidate the debt. Not only did this happen, but he was saddled with the obligation to redeem the debt in £'s sterling, and this obligation would remain until it was extinguished, *notwithstanding the fact that the value of the £ was all the time appreciating*. Thus, a debt contracted when the £ was (in terms of its pre-war purchasing power) worth only 10s. may have to be paid off when the value of the £ has risen to 15s., thereby imposing an entirely unexpected and undeserved burden on the debtor to the advantage of the creditor. Unfortunately, there is no information available to show how far this has been a contributory factor in the agricultural crisis. There can be no doubt that it was a very substantial factor; few persons, indeed, having charge of any branch of industry can have wholly escaped this consequence of a falling price level.

In the case of farmers who bought their holdings between 1917 and 1921, raising the purchase money by way of mortgages on the then value of the farms, it is quite certain that they were, and are, affected precisely in this way, thus adding still another financial burden to those arising out of the relatively high costs of production. It was not the farmer but the landowner who benefited by these transactions. Having managed, whether by luck or foresight, to unload his property on to the unfortunate farmer when the £ was thus depreciated to the value of 10s., all he had then to do, was to put the money he received for it in the bank, wait a couple of years, when to his gratification, if not to his astonishment, he would find that each £ he had been paid by the farmer at the time of the sale, had now increased in value by 33 per cent. But the poor farmer had to foot the bill!

So much for the question of costs. Under the stimulus of high prices during the war period, reinforced by the ploughing-up campaign of the Food Production Department, a large area of grass land was broken up, and the long process of decline in the arable area in the United Kingdom, which had been continuous from 1870 to the outbreak of the Great War, was temporarily brought to an end. The high prices of corn, in relation to the cost of production, now made it profitable to bring certain areas under the plough which hitherto would have been unprofitable, and farmers entered upon what appeared to some, to be a new era of cultivation.

The first effect of the ploughing campaign seems to have been an alteration in the relative proportion of

cereal crops, rather than a substantial increase in the total area. In 1914 a much larger area of autumn wheat was sown, but this was done largely at the expense of barley, the figures for which showed a substantial reduction in acreage. In 1916 there was a decline in the area under wheat, and, no doubt in consequence of the relatively high prices, farmers seem to have concentrated more on barley and oats. In the following year, however, owing to the pressure of the submarine campaign and consequent shortage of shipping, more drastic steps became necessary, and the Food Production Department, provided with compulsory powers, was charged by the Government with the duty of increasing food production in the country, in order to diminish our dependence on overseas supplies.

The general policy of breaking up grass land was carried out through the medium of executive committees in each county, and under the scheme a quota of land was fixed for each county, to be brought under the plough, based usually on the proportion borne by arable to grass in the year 1875. The actual carrying out of this programme was under the supervision of the executive committees. It is unnecessary to give details of the special difficulties which confronted this work, such as shortage of labour, of tractors, and of other agricultural machinery, but the main results as regards areas under cultivation in Great Britain, and the percentage increase or decrease of these areas, are given in the following tables for the years 1914-22 (p. 106).

With the end of the war the ploughing campaign terminated, and there soon followed a reaction in the opposite direction. Many schemes were put forward at this time, with the object of showing how the United

TABLE IX.

Acreage under Crops and Grass in each of the Years 1914-22 *in Great Britain.* (*In Millions of Acres.*)

Year.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
Total cultivated area	31·90	31·83	31·85	31·86	31·75	31·50	31·25	30·87	30·75
Permanent grass .	17·61	17·58	17·49	17·25	15·90	15·78	15·85	15·91	16·10
Wheat .	1·87	2·25	1·98	1·98	2·64	2·30	1·93	2·04	2·03
Barley .	1·70	1·38	1·50	1·62	1·65	1·68	1·84	1·61	1·52
Oats . .	2·85	3·07	3·08	3·30	4·02	3·68	3·30	3·16	3·15
Potatoes .	·61	·61	·56	·66	·80	·63	·71	·71	·72
Turnips, swedes, and mangolds .	1·91	1·77	1·73	1·77	1·71	1·81	1·80	1·68	1·65
Total arable area . .	14·29	14·26	14·35	14·61	15·85	15·72	15·40	14·97	14·65

TABLE X.

Acreage under Crops and Grass in each of the Years 1914-22 *in Great Britain. Percentage Increase or Decrease over the corresponding Figures for* 1913.

Year.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
Total cultivated area	− ·09	− ·31	− ·25	− ·22	− ·56	− 1·35	− 2·13	− 3·32	− 3·70
Permanent grass .	+ ·23	+ ·06	− ·46	− 1·82	− 9·50	− 10·19	− 9·79	− 9·45	− 8·37
Total arable area . .	− ·49	− ·70	− ·07	+ 1·74	+ 10·38	+ 9·47	+ 7·24	+ 4·25	+ 2·02
Wheat .	+ 6·25	+ 27·84	+ 12·50	+ 12·50	+ 50·00	+ 30·68	+ 9·66	+ 15·91	+ 15·34
Barley .	− 3·41	− 21·59	− 14·77	− 7·95	− 6·25	− 4·55	+ 4·55	− 8·52	− 13·64
Oats .	− 2·06	+ 5·50	+ 5·84	+ 13·40	+ 38·14	+ 26·46	+ 13·40	+ 8·59	+ 8·25
Potatoes .	+ 3·39	+ 3·39	− 5·08	+ 11·86	+ 35·60	+ 6·78	+ 20·34	+ 20·34	+ 22·03
Turnips, swedes, and mangolds .	nil	− 7·33	− 9·42	− 6·81	− 10·49	− 5·24	− 5·76	− 12·04	− 13·61

Kingdom might in future be made wholly or partly self-supporting. "Some of the schemes propounded," to quote Mr. Venn,[1] "were highly ingenious, and had obviously been the subject of much thought. All

[1] "Foundations of Agricultural Economics," p. 179.

seized on the recognised fact that both the weight and value of the produce from a given area under the plough greatly exceed those from a corresponding grass acreage, and that it is a wasteful process to rear live stock for meat-producing purposes on food that might be directly beneficial to human beings. But all perforce ignored the predilection of British farmers . . . for an essentially 'safe' system of agriculture, and also assumed that the economic conditions ruling in 1918-20 would continue *indefinitely, and that high farming would therefore* be a permanent source of profit." It was the latter assumption which almost immediately proved to be a profound miscalculation.

The ploughing of grass land and the extension of arable crop areas was, of course, largely the direct consequence of the national campaign, and there seems no doubt that this campaign pushed it beyond the point which would have been reached if it had simply been left to follow the stimulus of high prices. But it could not have succeeded as it did, had not the economic conditions at the time been extremely favourable. The conditions analysed in the upward price curves given in this chapter, show very clearly that the farmer's economic position during the years 1914-19 was exceptionally strong, much stronger, in fact, than before the war. Relative to the prices of agricultural produce on the market, the cost of all the principal agricultural requisites and services, with the exception of feeding stuffs, was lower than before the war, resulting in a proportionately larger margin of profit. Moreover, in regard to costs not shown in these diagrams such, for example, as rents, for which precise figures are not available, there is no doubt whatever that these did not rise to a figure

in any way comparable with the rise in the general level of agricultural prices at the end of 1919 and the beginning of 1920. But again, the advantage to the farmer lay not so much in the fact that prices were high, as in the fact that they were *rising*. In a rising market, he benefited very largely from the "lag" in the movement of farm costs, which subsequently proved so disastrous when the market was falling.

But prices could not go on rising for ever; sooner or later there must have been a readjustment, when farm prices would no longer stand at a relatively higher level than farm costs. The optimism bred from the conditions of a rising market, as has been proved over and over again in the commercial history of the last century, was a false optimism. It had its foundations not in any permanent improvement in the economic conditions of British agriculture, but in conditions essentially unstable and transitory, and, as we all know, they came to an end abruptly in the spring of 1920.

It is unnecessary to discuss here the fixing of statutory minimum prices under the Corn Production and Agriculture Acts, since it had little effect on the course of agricultural prices during the years when these Acts were in operation. Under the Corn Production Act of 1917, minimum prices for the year were theoretically in force, but actually were never operative since the market prices were much higher. Subsequently, in 1919, fresh minima were fixed under this Act, but the average prices still remained above the guaranteed level. In 1920 statutory prices came into force, which were based on the cost of imported wheat during the preceding three months, up to a limit of 95s. per quarter. This system continued in operation up till August, 1921,

when the grain trade was decontrolled. The Agriculture Act passed in 1920, and repealed in 1921, guaranteed minimum prices for wheat and oats of the 1921 and subsequent crops, based on the cost of production. After repeal, farmers were paid £3 in respect of each acre of wheat, and £4 in respect of each acre of oats of the 1921 crop. Thereafter, the trade was free from any Government control of prices, and it will be seen that it was only in respect of the 1920 and 1921 crops that the farmer derived any material benefit from the operations of these Acts.

The general decline of wholesale prices came to a halt roughly speaking at the end of 1921, and in 1922 and the first quarter of 1923, general commodity prices remained fairly steady at a level between 50 and 60 per cent. above pre-war. Agricultural prices, on the contrary, as indicated by the index figure based on the average of the corresponding months in 1911-13, and shown in chart XIII., continued to move downwards until September, 1922, when it stood at 57 per cent. above pre-war, as compared with 75 per cent. in January, 1922. This is deserving of some notice.

In 1921, all agricultural produce without exception shared in the general fall in prices which would seem, therefore, to have been primarily due to the single predominating cause—the appreciation in the purchasing power of money. What is the position as regards the succeeding year? The figures for 1922 show that, in the cases of sheep, pigs, cattle, butter, cheese, poultry, and hay, there was no general decline at all, in fact most of these products ended the year at higher prices than at the end of 1921. The principal cases where the fall did occur, are grain, potatoes, milk, and eggs,

the first being due partly to poor quality as a result of the bad season and partly to other causes to which reference will be made below; the second to abnormally high yield, while the fall in price of milk was mainly due to the fact that a larger number of farmers had been attracted into the milk business, with the result that, at the time the contracts were made, more milk was on offer than had previously been the case. The fall in price of eggs was consequent upon increased imports from abroad, and was emphasised by an unusual rise at the beginning of the year, attributable largely to cold weather, so that when eggs came on the market later in the year the fall was exceptionally heavy. A similar fall in price which is not shown in these diagrams, occurred in the case of vegetables and fruit, due mainly to the increased supplies in consequence of the favourable season, and in the case of apples to increased imports. All these movements had their effect on the index figure for agricultural produce in 1922, causing the curve shown in diagram 13 to continue its downward course. But the important point is that this movement was no longer a *general* one. It was consequent upon the downward movement in certain cases only, which outweighed the rises in others, and in each of which the primary cause was not the alteration in the purchasing power of money, but was dependent upon the abundance or quality of the individual products. In this sense the fall in the index figure for agricultural prices in 1922, differed in character from that of 1921. The purely monetary causes which predominated in 1921 had largely disappeared.

In the subsequent movement of agricultural prices,

the fact of outstanding importance is the continued depression in corn prices. The following table compares the movement in prices of wheat, barley, and oats with that of general agricultural prices, and of wholesale commodity prices from January, 1922, to September, 1923 :—

TABLE XI.

Percentage Increase in Prices in each Month from January, 1922, to August, 1923, as Compared with the Average of Corresponding Months of 1911-13.

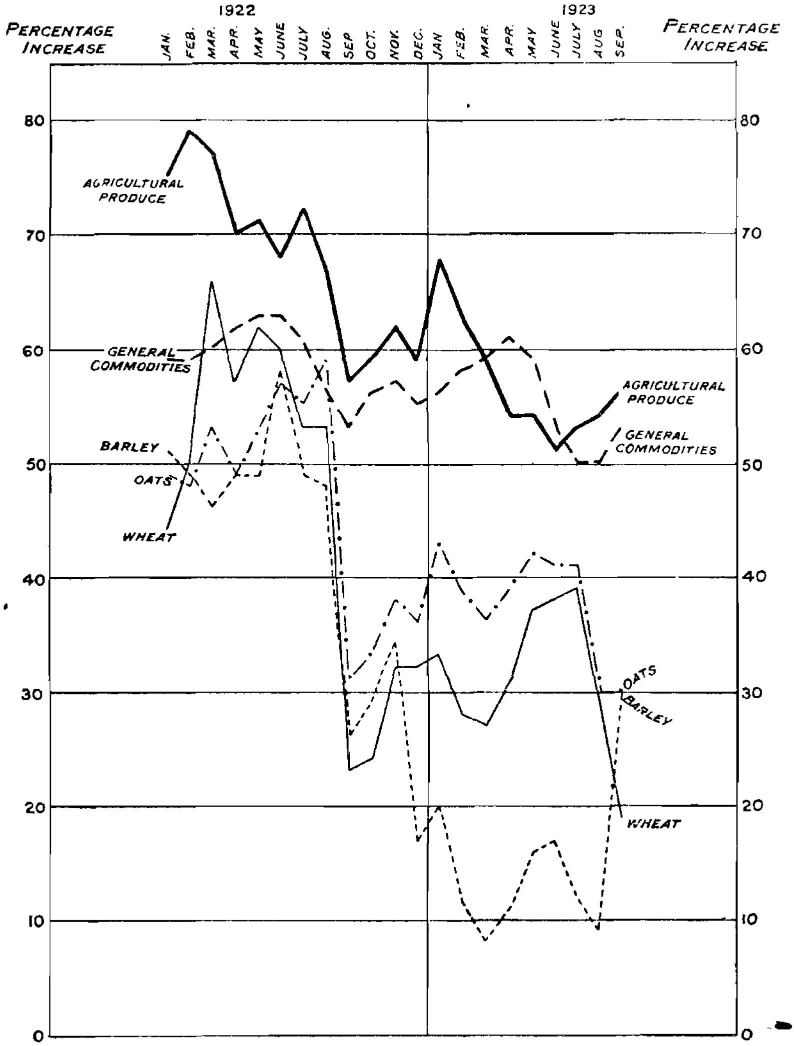
Period.	Wheat.	Barley.	Oats.	Agricultural.	General Commodities.[1]
January, 1922	44	51	49	75	59
February	50	49	48	79	59
March	66	46	53	77	60
April	57	49	49	70	62
May	62	49	53	71	63
June	60	58	57	68	63
July	53	49	55	72	61
August	53	48	59	67	56
September	23	26	31	57	53
October	24	29	33	59	56
November	32	34	38	62	57
December	32	17	36	59	55
January, 1923	33	20	43	68	56
February	28	12	39	63	58
March	27	8	36	59	59
April	31	11	39	54	61
May	37	16	42	54	59
June	38	17	41	51	53
July	39	12	41	53	50
August	29	9	30	54	50
September	19	30	30	56	53

These figures are represented graphically in chart XVIII.

A glance at this chart is sufficient to show that the

[1] Based on the average of 1911-13.

CHART XVIII.—Percentage increase in price of Wheat, Barley, and Oats, compared with percentage increase in price of Agricultural Produce and Wholesale Commodities, January, 1922, to September, 1923. (Average of 1911 to 1913 = 0.)



(*Note.*—The fall in barley prices at the end of 1922 and beginning of 1923 was largely due to the low proportion of the 1922 crop which was suitable for malting.)

fall in grain prices has proceeded a long way beyond the fall in general commodity prices, and of the prices of other agricultural produce.[1] To this depression is largely due the very serious condition of arable farming in this country, to which so much public attention has recently been directed.

The breaking up of grass land and the extension of the corn-growing area, described above, was the direct and obvious reaction to the prevailing high prices during the war period, although in this country it was further developed by the ploughing up policy which has already been described. What occurred in the United Kingdom, occurred also in the other corn-growing countries of the world. The stimulus of high prices increased by the failure of Russia and other European countries, brought immense new areas under corn, with the result that the conditions of the world's corn production, and both the present and the potential supplies of the future, underwent a profound change. It was a change which carried with it a menace to the corn grower, far more serious than anyone at the time suspected, for in other countries, no less than in England, the increased corn area was very largely brought into being by conditions fundamentally transitory.

Taking the principal wheat-exporting countries other than Russia and the Danubian countries, the following table shows the increase and subsequent decrease of wheat areas :—[2]

[1] The curve for "agricultural produce" here shown *includes* corn, and, therefore, the divergence between corn prices and prices of *other* agricultural commodities would be greater than is actually shown in this diagram.

[2] "Journal of the Ministry of Agriculture," December, 1923.

TABLE XII.

	1909-13. (Thousands of Acres.)	1918-19. (Thousands of Acres.)	1923. (Thousands of Acres.)
United States .	47,097	67,437	58,253
Canada . .	9,945	18,240	22,165
Argentine .	15,799	17,425	16,081
Australia .	6,798	8,882	9,804
India . .	29,043	29,642	30,492
	108,682	141,626	136,795

Thus, during the upward price movement, the total area under wheat in these five countries was increased by nearly 33 million acres. In 1920 came the break in prices and the wheat area in these countries began, in consequence, to decline. A reduction in area is no less the obvious reaction to low prices, than an increase in area is to high prices. But unfortunately, economic conditions do not adjust themselves immediately; if they did, half the economic troubles of the world might disappear. When the equilibrium has been disturbed to the disadvantage of producers or other persons directly affected by it, readjustment to the new conditions necessarily takes place, but it is usually accompanied by a number of factors all of which contribute to delaying the restoration of equilibrium—doubts, prejudices, or hopes, lack of adequate estimates, hesitation to incur the expense of carrying out the readjustment, reluctance to undo the work of previous years, and many others. In spite of the inexorable demands of economic laws, people tend nevertheless to resist, hoping that conditions may not turn out to be what they seem, or that some future change may restore a state of affairs which will

be more favourable. The operation of all these factors produces a "lag" in the readjustment, and this is precisely what has happened in the wheat-growing countries of the world. Just as the diagrams relating to the costs of farming quoted above, reveal a "lag" in the readjustment of farming costs to produce prices, so here there is a "lag" in the readjustment of areas, but a far more protracted and a far more disastrous one to the farmer.

That the cause of this "lag" is deeply imbedded in the psychology of producers, indeed in the natural human instinct to resist unpleasant or unfavourable happenings, is illustrated in the following quotation from the Report of the Secretary of the United States Department of Agriculture ("Year Book," 1921, p. 5):—

"The farmers had taken it for granted that war prices could not continue. They had expected lower prices for their own products. They had not thought that their prices would drop as low as they did, but during the winter they accepted these very low prices with their usual philosophy. They borrowed more money to keep themselves going, and in the face of a continuing decline in prices of almost all of their crops, they put out ample acreage in the spring of 1921. At that time prices of farm products were much below the cost of production and far lower relatively than the prices of other commodities. The farmers' wages had thus been reduced to about the pre-war level, but the wages of other people, whether paid direct or through the products of their work, remained very near the war level, and from 50 to 100 per cent. or more above the pre-war level. This was a disturbing condition, but

the farmer hoped . . . that the prices of other things, including wages, which have the greatest influence on such prices, would come down to a fairer and more nearly normal relation to the price of farm products. *There was no attempt on the part of the farmers to restrict production.*"[1]

In 1923, as the above table shows, the five exporting countries were growing 28 million acres of wheat in excess of what they grew in the pre-war period, 1909-13, an area which in itself was more than enough to replace the whole of the pre-war exports from Russia and the Danube. Although the restriction of area had begun, it had proceeded too slowly. Meanwhile, Europe was recovering. The United Kingdom, Italy, Germany, France, and the Netherlands, whose pre-war average (1909-13) was 34½ million acres, were growing, at the lowest point reached during the war, about 26 million acres. In 1923, the areas of these countries had recovered to about 31 million acres, added to which there was a very large, though not altogether certain increase in the wheat acreage in Russia.[2]

Thus it comes about that the world's wheat production has increased beyond the world's demand, if demand is measured by the capacity to pay,[3] and the general depression of prices, consequent upon monetary deflation, has

[1] The italics have been added.

[2] Russia has resumed the export of grain. According to "Russian Information and Review," October 27, 1923, the Russian exports for the 1921-22 season amounted to 1715 million poods, and for the 1922-23 season to 2243 million poods.

[3] Under the existing distribution of the world's wealth, it is necessary to take this measure of Demand. To say that the real demand for the world's wheat production is insufficient, with a large part of Europe on the verge of starvation, would, of course, be ludicrous.

been succeeded by a further depression of wheat prices due to increased production. What applies to wheat, applies also in greater or less degree to other corn crops, and we find that the drop in corn prices below the general level of commodity prices, illustrated in chart XVIII., has not been confined to England, but has been the common experience of the corn-growing countries. Confronted with this situation, the United States Government, in the spring of 1923, called a conference to examine it, from whose report the above table and figures have been extracted. This conference came to the obvious conclusion—that the remedy lay in restriction of areas. Nor is evidence lacking that the American farmer has at last been compelled to bow to the inevitable, and abandon a portion of his corn area. An inquiry conducted in the United States of America by the Department of Agriculture, among 25,000 farmers, elicited replies to the effect that they intended to reduce their 1923 winter wheat area by 15½ per cent.

Thus the readjustment slowly and painfully proceeds. Though cereal prices throughout the world remain relatively low, a restriction of area would seem to be taking place, at any rate in some of the exporting countries; the pendulum has begun to swing in the opposite direction, and may be expected to continue in this direction until areas under corn bear a more normal relation to demand. Indeed, if we may judge by previous economic history, in the end it may even swing too far in that direction, and when this happens, cereal prices will again begin to rise. Some rise, indeed, seems inevitable for the simple reason that corn cannot continue to be grown at a loss. The average loss of American farmers during 1922-23 was officially estimated at 12 cents per bushel

of wheat, by the United States Bureau of Agricultural Economics—equal to about 4s. 3d. per quarter. In this country it has been estimated at 6s. 3d. per quarter.[1] Such conditions cannot endure for ever. In spite of the tenacity with which the American farmer clings to the hope of a rise in corn prices without an equivalent restriction of his grain area, sooner or later world's prices are bound to determine world's production on a basis which yields a profit to the grower.

These circumstances give the key to the situation in which British arable farming found itself in 1923. To assume, as has sometimes been done, that the war and its consequences have fundamentally altered the competitive position of arable farming in this country, is completely to misinterpret the events of the last six years. Whether or not the competitive relation with other countries is to be affected one way or the other, cannot be judged until the reactions and readjustments in consequence of the general economic upheaval have finally settled down into some kind of stable equilibrium. It is nearer the truth to say that the economic disturbance consequent upon the war, has produced conditions of depression not only in England, but in all the leading corn-growing countries in which a period of monetary inflation has been followed by a period of monetary deflation. From these conditions it is the common need, as it is also (or should be) the common aim of arable farmers in all these countries, to extricate themselves. As in adjusting cost of production to prices, so also in adjusting production to effective demand, agriculture, by its very nature, is under a disability in comparison with almost

[1] C. W. Barnard, "The Nation," November 10, 1923.

any other industry, and in the United Kingdom the farmer is at present merely sharing with his foreign competitor the unfortunate consequences of this disability.

It may now be possible to give some answer to the question so long postponed, as to why the agricultural crisis in America, at any rate at the beginning, was more severe than in this country. The table given on page 95 showed that in the United Kingdom the fall in agricultural produce prices was less rapid than the fall of general commodity prices, and the "purchasing power" of agricultural produce shown in charts XVI. and XVII. consequently rose above its pre-war value. In America, the precise reverse happened. The fall in prices of farm produce was *more* rapid than that of general commodities, and the "purchasing power" of agricultural commodities fell by as much as 37 per cent. between the beginning of 1920 and March, 1921. "The farmer's difficulties were undoubtedly increased," says the report of the Joint Commission of Agricultural Enquiry,[1] "during this period of pressure for liquidation by the fact that prices of commodities that he had to sell declined at a faster rate than the prices of the commodities that he was obliged to buy." Not only did this happen, but the American farmer appears to have suffered to an exceptional degree from what has been described above as "frozen credit." The following extract from the report of the same Commission relates to this point. "It is without doubt true that the pressure of discount rates and of liquidation in the agricultural sections of the country resulted in great hardship, loss, and sacrifice among the

[1] Vol. ii. p. 89.

agricultural population. . . . The pressure was greater upon the agricultural sections because of the peculiar conditions surrounding the marketing of agricultural crops, and as a result of the fact that the crops of 1920 had been produced at costs greater than those applicable to any other crops in the history of the country."

Deflation in America was short and sharp ; the rapid fall in prices covering little more than a year, but by the middle of 1921 it had left American farmers weighed down by an almost intolerable burden of debts which they found themselves, at any rate for the time being, unable to redeem. "Many thousands of farmers," says the Secretary of the United States Department of Agriculture,[1] "have not been able to weather the storm, notwithstanding their most strenuous efforts. Thousands who purchased land during the period of high prices, making a small payment down, have been obliged to give up the struggle, let the land go back, lose all the money they paid for it, and start anew. Many thousands of renters who had substantial savings invested in farm equipment and live stock have gone through the same experience and have lost everything." An inquiry by the Department of Agriculture, in the spring of 1923, amongst some 68,000 owner-farmers in fifteen States covering the period of January, 1920, to March, 1923, elicited the information that 4 per cent. of these farmers lost their farms during this period through foreclosure or bankruptcy, 4·5 per cent. lost their farms without legal proceedings, and a little over 15 per cent. had been spared such loss up to March, 1923, only because of the leniency of their creditors. Out of nearly 26,000 tenant-farmers, 7·2 per cent. lost property through fore-

[1] "Year Book," 1922, p. 8.

closure or bankruptcy, 7·8 per cent. lost property without legal proceedings, and 21·3 per cent. retain their property only through the leniency of their creditors.[1] So serious was the financial plight of American farmers, that the Government were compelled to take drastic action; the War Finance Corporation, a State credit institution having a capital of $500,000,000 created and guaranteed by the United States Government, was revived, and was used for the purpose of providing credit to agriculture, avowedly with the object of enabling farmers to tide over the period of acute depression.

Whatever may be said of the monetary and financial policy of the United States Government, and the Federal Reserve Board, the Government soon realised that, since financial causes were at the root of the agricultural crisis, financial remedies must be applied for its alleviation. When the Agricultural Credits Act was passed in August, 1921, there was, to quote the words of the Annual Report of the War Finance Corporation, for the year ended November 30, 1922, "a state of demoralisation everywhere among all classes of agricultural producers. Farmers and stockmen generally were in a desperate plight; breeding herds were being sacrificed on a wholesale scale; immature stock was being sent to the block; and cotton, corn, and other agricultural commodities commanded prices that were discouragingly low, in many cases materially below the cost of production. Forced liquidation and hasty selling impaired the farmer's buying power, and this, in turn, brought about a reduced demand for the products of industry. Bank deposits were being withdrawn and reserves

[1] "Report on Wheat Situation," by Henry C. Wallace, 1923, p. 35.

depleted, loans could not be collected, and the stability of our whole agricultural and banking structure was seriously threatened."

It was largely to alleviate this state of affairs that the War Finance Corporation was revived. Between November, 1921, and November, 1922, the Corporation approved advances for agricultural and live stock purposes amounting to $433,000,000 and the effect of the Corporation's activities had, by the latter date, already produced a marked improvement in agricultural districts. Some order was by this means brought into a state of affairs which had bordered on disaster, and the farmer was able to stop the process of forced liquidation which in itself had probably done much to accelerate the depreciation of agricultural prices, and could now look to the future more calmly, and with more confidence. Agriculturists in America, seem to have had a better appreciation than those in this country of the close connection with, and profoundly important influence upon agriculture, of financial and monetary events, and in some respects, an achievement even more remarkable than the resuscitation of the War Finance Corporation, was the securing, by amendment of the Federal Reserve Act, of representation of agriculture on the Federal Reserve Board.

Agricultural prices in America over the period between 1914 and 1921 followed much the same course as in this country, and the general character of the agricultural crisis showed a fairly close parallel with our own. *All* farm produce fell in price during the period of monetary deflation, that is to say between January, 1920, and June, 1921. The year 1922 was on the whole a period of rising prices in America and most agricultural produce benefited by this rise. The acute

crisis was over so far as the direct effect of deflation was concerned ; agriculture still suffered, however, from the disparity between the prices of farm products and those of other commodities, a disparity which appears to have been aggravated by the general increase in American tariffs towards the end of that year.

Since the beginning of 1922, the agricultural depression in the United States, as in England, was most severe in the case of cereals, and for the same reasons. The depression in the wheat belt has become a problem of the first magnitude although much assistance appears to have been rendered to wheat producers through the existing and emergency credit machinery. The continued depression, however, seems to have put a great strain on the banks in agricultural districts, so much so that strong apprehensions of a credit panic in the north-western wheat belt were entertained in the latter part of 1923. That these fears were not without foundation is shown by the statement that at the beginning of February this year (1924) as many as 200 local banks were reported to be in the hands of receivers.

Where the hardship and suffering resulting from the agricultural crisis was most severe, not only in this country but elsewhere, was, as is always the case in a trade depression, amongst the agricultural labourers.[1] Unfortunately information is lacking as to the numbers of agricultural workers discharged in this country in consequence of the laying down of arable land to grass or otherwise in consequence of the crisis, nor is there adequate information upon which it is possible to

[1] For an account of the unparalleled suffering of agricultural workers during the depression following the Napoleonic Wars, see Lord Ernle's "English Farming, Past and Present." Longmans, Green & Co.

estimate the real consequence to the labourer of the fall in wages which has occurred since the autumn of 1921. With the repeal of the Agriculture Act, the Agricultural Wages Board came to an end, and the statutory minimum wages ceased to operate after October, 1921. The labourer, whose high hopes of an improved standard of living had been based on the transient prosperity of 1917-19, saw his hopes blighted, and the immediate passing away of the better conditions which he had expected, not without reason, might be permanent. Once more he was to be forced back towards the conditions of economic bondage from which such efforts had been made to free him. In 1920 the aim of the workers' representatives on the Wages Board was a universal minimum wage of 50s. per week. In actual fact, the cash remuneration of ordinary farm workers in England and Wales represented in August, 1920, a rise of 160 per cent. over July, 1914, while the cost of living index number then stood at 161 per cent. but with the abolition of the Wages Board, the parallel between these figures soon disappeared, and in May, 1923, with the cost of living at 69, farm wages had already sunk to 56 per cent. above pre-war. In many parts of the country the economic status of the agricultural labourer had fallen to a standard even below that of 1914.

Such, in general outline was the effect on agriculture of the causes described in Chapter II., and having thus traversed the ground, it is perhaps possible to draw some general conclusions as follows :—

1. Agriculture, possibly more than any other staple industry, suffers from an alteration in the general level of prices, that is to say, an alteration in the purchasing power of money.

2. This arises from the fact inseparable from farming operations, of the long period which elapses between the time when the farmer lays out his money, and the time when he reaps the reward of his industry; added to which there is a "lag" in the movement of wages and other costs behind the movement of produce prices, thereby increasing the loss sustained in a period of rapidly falling prices.

3. Rising prices tend to bring about an increase in productive areas, particularly in exporting countries, and when once the equilibrium between supply and demand has been greatly disturbed, on account of the difficulties of obtaining adequate knowledge of demand and other reasons, the readjustment is both slow and painful.

4. Such being the case, monetary operations resulting in the raising, followed by the lowering, of the general price level, were bound to throw the agricultural industry into a state of economic disorganisation. By the violent fluctuation in the purchasing power of money, during and after the war, the whole agricultural machine was put out of gear, and the economic disabilities peculiar to agriculture became magnified into difficulties and even dangers of unprecedented importance.

5. While the readjustment to a lower price level in certain branches of agriculture, such as stock farming, would seem to have taken place relatively quickly; where the reaction to high prices brought about the ploughing up of large new areas not only in England but in many foreign countries, the readjustment has been protracted long after the general downward price movement came to rest.

6. What agriculture needs, is the stabilisation of prices.

CHAPTER IV.

STABILISATION.

It would be a serious mistake to think that fluctuations in the general level of prices occur only in time of war. The truth is, we have never yet had a stable price level. What occurred between 1914 and 1922 differed only in degree from what has occurred repeatedly during the last century. The violence of the price disturbance resulting from the European War has, however, had one advantage; it has thrown the whole economic question of price changes into relief; it has concentrated much specialised thought and some public attention upon it, and—since we are now better equipped in the matter of statistical data than in earlier times—it has led to much more detailed analysis of the causes and effects of such movements. Although alterations in the general price level accompanied by booms and depressions in trade have occurred often enough between the Napoleonic Wars at the beginning of the nineteenth century and the European War, this does not mean that in time of war there are not special circumstances which may be absent in times of peace. But whether in war or in peace the direct cause of alteration in the general price level is a disturbance in the equilibrium between the amount of purchasing power on the one hand, and the

amount of goods or services to be marketed on the other.

One thing that the war has revealed is that the highly organised credit systems of modern industrial countries, which have enabled business men to carry on and develop industrial enterprises, have also been the means of enabling Governments to carry on the special enterprise of war. A big war with its vast modern equipment is far too expensive an undertaking to be paid for out of income, and the credit machinery designed for the assistance of peaceful industry has thus been called upon to furnish Governments with the necessary overdrafts with which to meet the heavy liabilities which the conduct of war imposes on them. The only difference of principle is that Government borrowings have been on a scale so great, that it has usually been thought necessary to relieve the banks from the normal safeguards against inflation, and inflation has consequently been the common accompaniment of war finance.

No one who has studied the economic history of the last century will deny the occurrence of these upward and downward price movements, in repeated succession. Trade and agriculture, alike, have been subject to what are generally known as trade or business "cycles." "The business cycle," to quote Prof. W. C. Mitchell, writing in reference to the United States of America,[1] "swinging from the period of active business, speculation, expansion, and optimism, down into the trough of low profits, many bankruptcies, part-time operations, and unemployment, through a period of recuperation and back to the peaks of optimism again, has run its course some fifteen times in our country since 1812.

[1] "The Stabilisation of Business," p. 2.

No one who studies the record of the past can doubt the reality of this cyclical movement in business. And no one can doubt that crises and depressions have brought avoidable disaster upon tens of thousands of business enterprises, and offered them unseized opportunities of profit."

The industrial history of the United Kingdom is no exception to this. The form which these trade cycles have taken, their duration and their intensity, have been subject to many and very different influences such as wars, bad harvests, fiscal legislation, gold discoveries and the like, which have helped to give each trade boom or depression its special character, but in spite of these differences, they have always borne a general resemblance to each other.

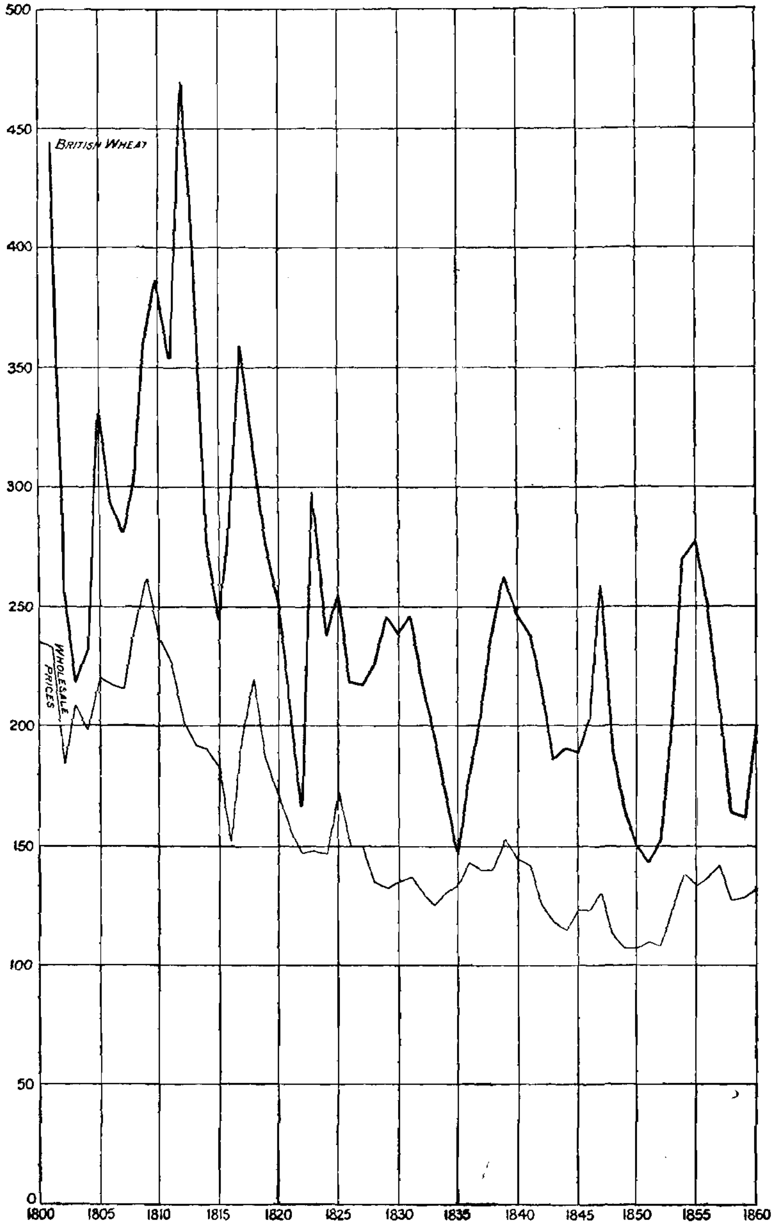
It would take too long to describe in this chapter the manner in which a trade boom gradually degenerates into a trade slump and again slowly revives until another boom is started ; nor is it possible to give an account of the divergent views that have from time to time been held to explain these occurrences.[1] It is sufficient to say that most modern opinion agrees that credit and credit machinery play in them a very large, if not predominant, part. When prices are rising the elasticity of the banking system, useful at first in producing greater trade activity, proves burdensome in the end, when the trade boom reaches its peak, helping to bring about those credit entanglements which are an early feature of declining trade, and adding so greatly to the losses and hardships of a period of depression.

[1] For a history of the price movement in this country during the last century, see W. T. Layton, "An Introduction to the Study of Prices."

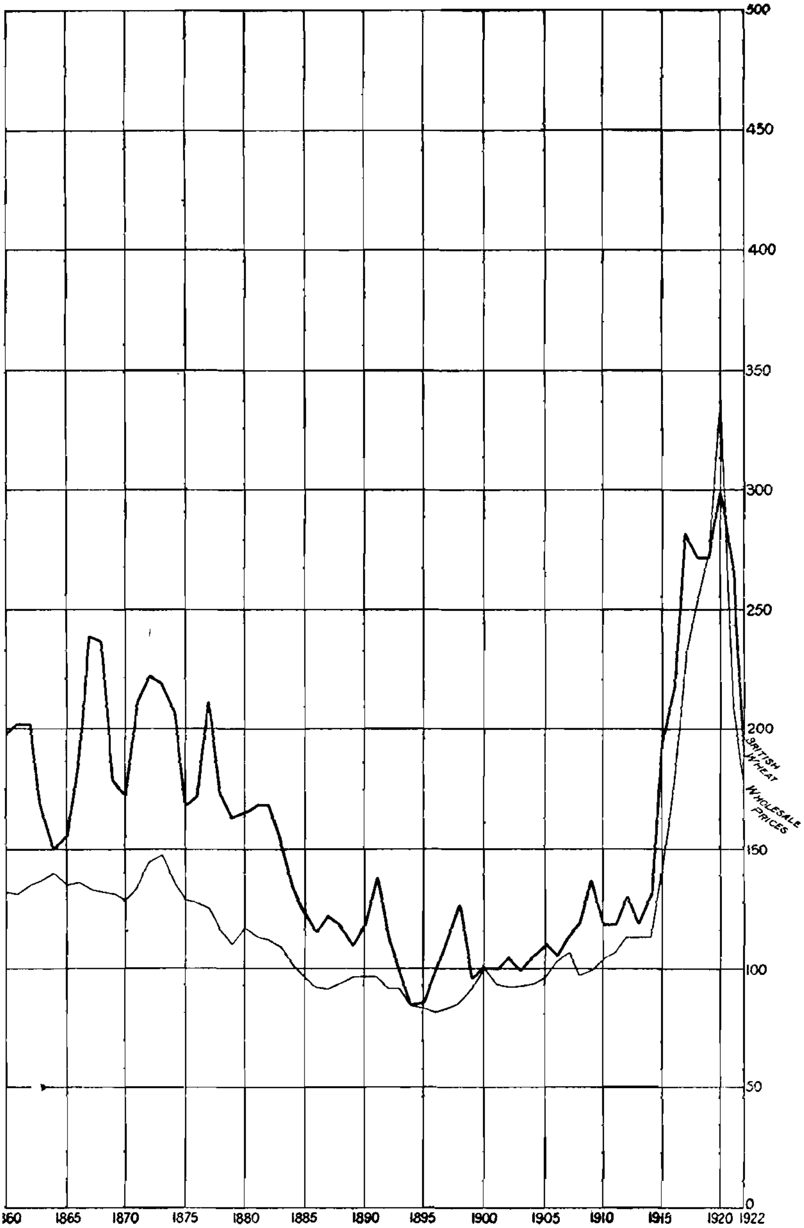
Agriculture has not escaped these rhythmical movements, although as will be considered more fully below, it is an industry which has so many distinct features, and rests upon conditions of supply and demand of such special character as to put it in a class by itself. Nevertheless, in so far as these changes in prosperity have a monetary cause, agriculture is as deeply concerned with them, and is as much a victim to them as any other industry. If alteration in the purchasing power of money lies at the root of these alternating periods, if it is a primary, even though it be not the sole cause, then all industries alike must suffer from the evil consequences, just as they have done in the period of unprecedented rise and fall in prices described in the last two chapters.

In recent years the study of price movements has been greatly facilitated by the elaborate and carefully prepared system of index numbers recording the changes in the prices of commodities, which have been collected in most civilised countries. It is unfortunate that statistics of agricultural prices have been collected only in comparatively recent times, and it is therefore very difficult to examine the movements of agricultural prices generally over a long period of years. Wheat is, however, a commodity in respect of which there are ample statistical records, and it is possible to apply to the movement of wheat prices over a very long period, an analysis somewhat similar to that given at the beginning of Chapter II. in respect of certain agricultural products between 1914 and 1922. In chart XIX. are compared the prices of wheat with those of general commodities during the whole of the last century and beginning of this century. The curve for commodity prices

CHART XIX.—Variation in prices of British Wheat and of



Wholesale Commodities, 1800 to 1922 (1900 = 100).



is based on the index figures of Jevons and Sauerbeck, and that for wheat upon the Gazette prices of wheat, both expressed as percentages of the value of these figures for the year 1900. The first thing that is noticeable about the curves here shown—apart from the violence of the fluctuation in wheat prices—is that, on the whole, the same causes appear to have been operative in both; on the whole, when the commodity curve is rising, the wheat curve is rising, when commodity prices are falling, wheat prices are falling. Thus variation in the purchasing power of money has throughout played a part in determining the course of wheat prices though it is obvious that other factors have also had a very important and often predominant influence.[1] That there has never been anything approaching stability of wheat prices is shown only too clearly in this diagram, and with these curves in mind we may turn to examine briefly, the more important conditions and events which in a greater or less degree are reflected in them.

At the end of the Napoleonic War the price curves are seen to take very much the same sudden downward course as a century later they took after the European War. What was the condition of agriculture in the former period?

Prolonged and exhausting wars had been fought in Europe, prices had risen to a peak in 1808 and fallen again to a low point in 1816. After the peace a general

[1] To assume that the fluctuations in the wheat curve in excess of the corresponding movement in the general price curve, are due *exclusively* to non-monetary causes, would be a mistake. It is quite possible for monetary influences which cause only a moderate movement of the general price level, indirectly to bring about a much more violent oscillation in the prices of particular commodities.

expectation arose, as is often the case, of quick return to prosperity. There was thus a certain parallel between the circumstances immediately following these wars, and the present. Let us see how far this parallel holds good in regard to agriculture.

The condition at that time could hardly be better described than in the words of Lord Ernle, from whose well-known book, "English Farming, Past and Present," the following extracts are quoted—

"For six years after the end of the war the proverbial association of 'Peace and Plenty' proved a ghastly mockery to all classes of the community. To agriculturalists peace brought only beggary. In the first rush of complaint, some allowance must be made for the disappointment at the immediate results of the end of the war. But the evidence of commercial depression was real and widespread. The disordered state of the currency continued to injure credit, to disturb trade, to create wild speculation instead of sound business. The labour market was glutted. . . . Industries to which the war had given a feverish activity languished."

Referring to the period of rising prices, he continues—

"The inflated prices of the war had conferred, from one point of view, a great advantage on the agriculture of the country. They brought under the plough districts which, but for their stimulus, might never have been brought into cultivation. . . . Money made by farming had been eagerly re-invested in the improvement of land. For the same purpose banks had advanced money to occupiers on the security of crops and stock which every year seemed to rise in value."

"In the period 1814-16 the agricultural industry

passed suddenly from prosperity to extreme depression. At first farmers met their engagements out of capital. When that was exhausted, their only resource was to sell their corn as soon as it was threshed, or their stock, for what it would fetch. . . . Bankers pressed for their advances, landlords for their rents, tithe-owners for their tithe, tax collectors for their taxes, tradesmen for their bills."

"For the next twenty years the same record of depression is continued. . . . Violent fluctuations in prices continued to overthrow all calculations ; the wheat area alternately expanded and contracted."

"Some had consulted their pecuniary interests by selling their land at fancy prices, which they took into business. Others sold and embarked their capital as tenant-farmers in hiring larger areas of land, on which they could take fuller advantage of the price of corn. Those who remained on their own estates were for the most part ruined. Many had raised mortgages to buy more land, and to improve their properties, and to put their children out into the world. Prices fell ; but the private debt, as well as the public burdens, remained. The struggle was brief ; farming deteriorated ; buildings fell out of repair ; creditors pressed ; finally the estate was sold."

Such was the agricultural crisis which began in 1814. What a lesson unlearned ! Economic history repeats itself almost page for page. Nevertheless, a century later when another almost unparalleled fall in prices took place, when the same economic laws drove agriculture and business into the trough of an acute trade depression, every one was taken by surprise—even the Government.

With the beginning of the reign of Queen Victoria

signs of improvement in agriculture became faintly visible, the industry deriving considerable benefit from the rapid development of transport and agricultural machinery. Twenty years later agriculture had passed back into a period of prosperity. The discoveries of gold in Australia and California had largely increased the world's gold supply[1] with the result that its purchasing power declined, producing a rise in the general level of prices. Agriculture and business alike benefited, added to which, the seasons were uniformly favourable. All the common symptoms of prosperity again were manifest. Rents rose, holdings were enlarged, drainage operations were extensively carried out and during the twenty years which followed the revival of 1853 "crops reached limits which production has never since exceeded."[2] The percentage rise in price of certain agricultural produce between the average of 1846-50 and of 1871-75 is given in the following table—

Wheat	6 per cent. rise.
Oats	24 " " "
Barley	25 " " "
Beef	55 " " "
Mutton . . .	34 " " "
Bacon	25 " " "
Potatoes . . .	1 " " "
Butter	40 " " "

After 1874 agriculture was once more plunged into a depression. In 1870, as will be seen from the diagram, a rise in the general level of prices took place, concurrent

[1] See W. T. Layton, "Introduction to the Study of Prices," Chap. VI.

[2] Ernle, "English Farming, Past and Present," p. 372. Longmans, Green & Co.

with the Franco-Prussian war, and the feverish industrial activity which characterises a trade boom once again set in. "Expanding trade increased the consuming power of the population, and maintained the prices of agricultural produce. . . . Farmers became infected with the same spirit of gambling which in trade caused the scramble for the investment of money in hazardous enterprises. In their eagerness for land they were led into reckless biddings, which raised rentals beyond reasonable limits."[1] The peak in the upward price movement was reached at the beginning of 1874. Then once again began the inevitable reaction. Between this date and 1896 the general level of prices declined by some 40 per cent. The following figures show the percentage fall in price of certain agricultural produce between the average of 1871-75 and of 1894-98—

Wheat	51 per cent. fall.
Barley	39 " " "
Oats	38 " " "
Potatoes	39 " " "
Beef	29 " " "
Bacon	26 " " "
Mutton	25 " " "
Butter	25 " " "

A multitude of causes both monetary and other, had converted a general and widespread trade boom into a no less widespread depression.[2] Indeed the movement was almost a universal one. In England, the United States, in Germany, and other European countries, there was a general fall in prices and a general depression of all branches of industry. To give a full analysis of the

[1] Ernle, "English Farming, Past and Present."

[2] See W. T. Layton, "Introduction to Study of Prices," Chap. VII.

agricultural depression of this period would take us too far afield ; scarcely ever in the history of agriculture were the causes more complex or more diverse. It was a period in which events of widely different character, and unconnected with each other, happened to coincide in bringing about a depression of great severity. A series of bad harvests added enormously to the effect of foreign competition in cereals then making itself felt more acutely than in any previous period in the nineteenth century. Means of transport were being rapidly developed, leading to the opening up of the wheat fields of America and a great extension of the wheat area of the world. But in addition to this there is little doubt that monetary causes played a large part in the general stagnation. From 1871 onwards there developed a very great increase in the demand for gold. Immediately after the Franco-Prussian War Germany established her currency on a gold basis, and in 1873 her importation of gold amounted to £55,500,000 sterling. Moreover, in 1878 the United States ceased exporting gold and began to import, consequently drawing a certain amount of gold from Europe, while during the same period the demand for gold by other European countries largely increased, as also did that from India. At the same time there was a falling off in the production of gold at the mines ; the supply was insufficient to meet the demand and consequently the purchasing power of gold began to rise and the general level of prices to fall. This is indicated in the downward movement of the price curves after the year 1873, shown on chart XIX., a movement to which the shortage of gold was undoubtedly one of the primary contributory factors. In the long period of depression between 1873 and 1896,

there were two distinct periods of crisis, one between 1875 and 1884 and the other after 1891. Both showed the usual symptoms of depression, both were accompanied by a fall in the general price level, by serious industrial depression, and by financial crises and bank failures. It was not until 1896 that the position began definitely to mend.

From this year to the outbreak of war in 1914 the general level of prices, roughly speaking, pursued an upward course, although it was interrupted by minor trade booms in 1900, 1907, and 1913 with depression in the intervening years. During this period agriculture —though it had its own difficulties and though it felt the effect of these cyclical movements in trade—was on the whole improving, as may be judged from the following figures, giving the percentage increase in price of certain agricultural produce between the average of 1894-98 and 1906-10:—

Wheat . . .	17 per cent. rise
Barley . . .	4 ,, ,, ,,
Oats	11 ,, ,, ,,
Beef	16 ,, ,, ,,
Mutton . . .	16 ,, ,, ,,
Bacon	20 ,, ,, ,,
Butter	17 ,, ,, ,,
Potatoes . . .	4 ,, ,, ,,

This brings us to the beginning of the greatest of all recent price fluctuations, which has been described in the two preceding chapters.

In this very brief sketch of the alternating booms and depressions of agriculture during the last century, it has not been possible to give any analysis of the economic conditions underlying them. Nevertheless, all of them

present certain features, common to each other and common to the upheaval of 1914-20. In each, agriculture and industry alike benefited and suffered, though to different degrees ; in each the instability of the purchasing power of money was an important and in some a predominant cause ; and in each the effect of a rising, followed by a falling price level, brought out the same symptoms of economic disorganisation. If it were possible to make a close examination of the economic effect of these cyclical changes on the business of farming, we should find that the conditions revealed would closely resemble those presented in the diagrams in the last chapter, differing from these in degree rather than in character ; for in a period of declining prices the same effects show themselves with persistent regularity. In short, a study of these earlier price movements, in relation to the farming industry, only reinforces the conclusion reached at the end of the last chapter, that the first economic need of agriculture is the stabilisation of prices.

The occurrence of trade cycles is almost as well known as their effect is misunderstood. Each cyclical depression leaves in its train a record of costly miscalculation, failures, bankruptcies, and the like, the worst, if not most of which, could have been avoided, had a proper diagnosis been applied to the disease before it became too late. Unfortunately the memory of persons to whom these above all things are of vital importance, is surprisingly short. Each boom and each depression is treated as though it were an occurrence without precedent. A period of rising prices, of expansion and large profits, soon comes to be regarded as a kind of millenium ; the past is forgotten, and plans are laid for

the future upon the assumption that this happy state of affairs will continue for ever. The boom ends; prices fall; a depression follows; and traders realising their miscalculations, seek only to save themselves and their possessions from the slippery slope down which the whole country, manufacturers, merchants, farmers, and all seem to be helplessly sliding. A trade boom reveals a nation industrious, prosperous, fully employed; a trade depression, shows a disorganised community of struggling individuals, hurriedly improvising emergency plans to counteract the effects from which they are suffering, or to escape threatened disaster. If the greatest economic upheaval in modern history has brought about a wider knowledge and understanding of these happenings, and has helped to dispel these illusions, the losses and hardships which it involved may in the future bring some compensation.

The study of the underlying causes of these fluctuations with the practical object of trying to prevent them, or at any rate of diminishing their harmful consequences, is one of comparatively recent date, but it has been given immense importance by the events of the last nine years. It would not be true, of course, to say that nothing has been learned from these occurrences in the past, or that no practical remedies have been devised. The passing in the United States of the Federal Reserve Act in 1914, described in Chapter II., is an instance of such a measure. A feature of the earlier violent trade depressions in America had been the occurrence of "runs" on the banks and consequent financial panics—in a modern, highly organised community, perhaps the most dangerous effect of a trade depression. Panics of this kind occurred in 1873, 1893, and 1907. The Federal

Reserve Act enabled the American banking system, through its greater elasticity, to meet the conditions prevailing at the time of a trade crisis, and it has in fact survived the worst slump in prices in American history. Similarly in the United Kingdom, towards the middle of the nineteenth century, the English banking system and practice became better adapted to meet periods of crisis, and this had a marked effect on the trade cycles of this country. But these were remedies rather than cures. Price fluctuations still occur, as those who have lived through the last ten years will always remember. How can they be prevented or at any rate minimised? What practical cures are there which can be applied to a disease so dangerous and so wasteful? It is hardly overstating the case to say that this is the question of supreme importance in industrial economics; it is a problem to the solution of which the happenings of recent years impel us with irresistible force.

Enough has been said in the preceding pages to show that past fluctuations in the prices of agricultural produce have been due partly to alterations in the purchasing power of a country's currency, that is to say to strictly monetary causes, and partly to alterations in supply and demand for farm produce, depending on seasonal conditions or other causes which cannot be directly controlled. This being the case any practical steps which can be taken with the object of stabilising agricultural prices must fall into two broad groups: (1) the stabilisation of the purchasing power of money, which concerns all commodities and all industries, and (2) the stabilisation of the prices of specifically agricultural products, where instability is due to other than monetary causes. The two problems are totally

different in character as also in their method of solution. Nevertheless, since monetary stabilisation could not in any event overcome *all* the harmful fluctuations in prices to which agriculture is exposed, the second problem is none the less a reality, and its solution none the less important.

Scarcity and abundance will, in the cases of individual commodities, go a long way towards explaining the rise and fall in prices, but they will not go far towards explaining the alteration in the general level of prices, for it is hardly to be expected that all commodities will simultaneously become abundant or fall short. For the explanation of the rise and fall of the general price level we must look rather to monetary causes than to those depending on questions of supply and demand. The experience of the war has made this distinction perfectly clear. It is true that war finance introduced the factor of inflation which should not be present in normal times when currency is established on a healthy basis. But this is mainly a question of degree. It means that Government borrowing has involved an unprecedented expansion of credit; it does not mean that in times of peace when inflationary Government finance is eliminated, credit expansion involving an alteration in the general price level will not take place.

To the first of these groups a great deal of attention has been devoted by economists in recent years, and since the evil effects of monetary instability are common to every one, the stabilisation of money is of greater importance than that of any other commodity. This book is directly concerned only with agriculture. But as in at least two of the agricultural depressions which have occurred since the beginning of the nineteenth

century, monetary events have played a predominant part, and in others a very important part; and as agriculture can never escape the effects of variation in the purchasing power of money—to whatever degree it may occur—it is necessary to refer first to the purely monetary aspect of the question of stabilisation. To quote the authors of a book recently published by the Pollak Foundation for Economic Research :—[1]

"In an industrial order founded on private property, division of labour, and competition, with its interest focused on the monetary aspects of nearly all its activities, there is no economic phenomenon so far-reaching in its consequences as unstable money. A shifting price level is sure to be accompanied by alternate periods of business elation and gloom, with the familiar trend of extravagance, injustice, excessive speculation, 'profiteering,' over-production, tight money, business failures, unemployment, and 'hard times'. . . . How to prevent these extreme shifts of the price level and extreme swings of the business cycle—the heights of prosperity and the depths of depression—is *the* economic problem."

The Stabilisation of Money.

According to the "Quantity Theory" of money, the general level of prices rises in consequence of an increase in the quantity of available purchasing power while the amount of goods or services remain constant, or in consequence of a decrease in the amount of goods and services, the amount of available purchasing power remaining constant or of both causes operating in

[1] "Money," by W. T. Foster and Waddill Catchings.

conjunction. The increase of purchasing power may be the result, as in the war, of inflation consequent upon Government borrowing but it also occurs in a trade boom. Its effect upon these movements may be summarised somewhat as follows :—

Whatever the initial cause of a period of active trade it is always associated with a tendency for prices to rise, a tendency which gradually spreads from wholesale prices to retail prices and wages. For a time the rising price level serves to stimulate demand still further (for there is a general desire to buy quickly on a rising market), and a circle of active demand and rising prices thus spreads throughout the whole industrial field. But the process requires, as an essential condition, an increase in the volume of purchasing power, and—since a large part of business is carried on on the basis of money borrowed from the banks—this means an increase in the advances or overdrafts granted to business men, in order to pay for the increased quantity of goods at the higher prices. Moreover, as the rise in prices works round to wages and retail prices, more cash in the shape of currency notes, etc., is required to pay for wages and other transactions for which currency notes are commonly used. Thus the public gradually draw larger quantities of cash from the banks, and the banks are consequently exposed to a double tendency: (1) an increase in their deposit liabilities, arising from loans, and (2) a decrease in their cash reserves, both of which tend to diminish the ratio of cash to deposit liabilities. In the end the banks find it necessary to take active steps to safeguard their reserves ; they raise the rates at which advances are made, reject applications for loans of doubtful security, and by one means or another

curtail the volume of credit. This means a diminution in the purchasing power available for business transactions; demand is checked until it falls below supply, and a reverse sequence of falling prices and diminished demand—the one reacting on the other—is set in motion. Gradually the deposit liabilities are diminished as wages and prices fall; cash flows back to the bank; reserve ratios recover, until ultimately the banks are once more in a position to lend freely. When this point is reached, by lowering the bank rate and by other means, money is "cheapened": credit becomes easier to obtain and there is once again an inducement to business men to borrow. The business community tend again to avail themselves of these facilities and the total volume of purchasing power consequently tends to expand.

The policy of the banks in increasing or decreasing credit thus plays a decisive role in the course of a trade cycle, although each individual bank is only to a small extent a free agent in the matter, its policy being very largely governed by that of the central bank.

It is probably true to say that monetary events are never the *sole* cause of trade booms and depressions, though many believe that they are the chief cause. Nor must it be supposed that the above sequence of events is anything more than a kind of monetary sub-structure of the whole complex mechanism of a trade cycle. Numberless other factors, both psychological and economic enter into it and contribute to the working out of the complete cycle of events. But what experience seems unquestionably to have established, is that trade is sensitive to an extraordinary degree to the actions of the banks, taken from time to time, with the object of contracting or expanding credit,—i.e. to the raising or

lowering of the bank rate and other steps taken for the same purpose,—and therefore that the machinery of credit has placed in the hands of those who control it a powerful instrument by which the course of industrial activity can be affected. Whatever other factors may influence the purchasing power of money, this one at least is amenable to control. It is, in short, by the appropriate use of this instrument, amongst others, that the protection of industry from the disastrous consequences of general price fluctuations is believed to be feasible, and, accordingly, for a policy of price stabilisation to be made effective. No advocate of price stabilisation proposes to *control* the causes of trade fluctuations, but rather to use the means which experience has proved to be effective, in order to counteract them.

Upon this fundamental conception, the policy of general price stabilisation is based.

The first essential in any such policy is, of course, the elimination of inflationary finance. Upon this all are agreed and the case need not be argued. This done, monetary stabilisation would rest primarily with the central banks who possess, in the greatest degree, control of credit policy. It would mean that the guiding principle of banking policy would no longer be a more or less automatic one depending on the "reserve ratio," so much as one founded upon the general index of commodity prices, the amount of unemployment, and other signs which are indicative of the general state of trade. In its practical application it would aim at "smoothing out" the curve representing the upward and downward course of successive trade cycles, as for example by imposing a higher discount rate at a point

in the upward movement *earlier* than that which would usually be done, if it were determined solely by consideration of the reserve proportions,—at a point before the trade boom has, so to speak, over-reached itself, where its application would tend to prevent those credit entanglements which may add so much to the severity of a trade depression. The burden of most of the criticism levelled against the action of the Federal Reserve Board in 1919 was that it applied the restriction of credit at the wrong time, it allowed the boom of 1919 to run its feverish course without attempting to use this means of checking it. Had it enforced this remedy in March instead of November of that year, much unnecessary suffering in the subsequent years might, it is contended, have been avoided.[1]

The importance of control of credit as a means of stabilising prices lies in the fact that it provides a corrective not merely to a monetary disease. Though purely a monetary remedy it can influence a much wider field. The sensitiveness of business to an alteration in the bank rate is a matter of experience, and it is not necessary to accept the Quantity Theory of money, or any other economic theory to know that restriction of credit has in practice a definite effect on the course of business activity. In short, what is necessary is a *different* use of the instrument which has always been applied by the central banks for the protection of their reserves. What is now wanted is that their policy

[1] It is worthy of notice that the recent policy of the Federal Reserve Board would seem to have been on these lines. General prices in America have, since the autumn of 1922, remained at a fairly stable level, between 40 and 50 per cent above pre-war in spite of the continued inflow of gold.

should be based on the wider conception of general industrial stability.

A recent exposition of how these principles might be put into practice in this country is contained in Mr. J. M. Keynes's book entitled, "A Tract on Monetary Reform."[1]

The internal price level being mainly determined by the amount of credit created by the banks, and the powers of the banks so to create credit being primarily dependent on the monetary policy of the Bank of England and the Treasury, the solution of the problem of monetary stabilisation in this country ultimately rests with these two authorities. Now in creating credit, the Joint Stock banks are guided by considerations of their reserve proportions. The ratio of deposits to "cash" held by these banks is determined more or less by rule of thumb, and is usually maintained at about 9 to 1, while the proportion of advances to deposits is, very roughly, about 1 to 2. To fall below the 9 to 1 proportion, is considered to be bad for the bank's reputation while, on the other hand, to rise above it is bad for its earning power. The banks, therefore, aim roughly at adjusting their total creation of credit up to their capacity as measured by this standard, and consequently the volume of their "cash," in the shape of bank and currency notes and deposits at the Bank of England, closely determines the volume of credit which they create. The amount of their "cash" reserves can be varied, as we have seen, in consequence of an increase or diminution in the assets of the Bank of England, and the manner in which an increase in these assets stimulates

[1] Pp. 178-197.

the creation of credit and hence tends to raise the general price level has already been illustrated in Chapter II. In addition to this, the power of the banks to create credit depends on their holdings of Treasury Bills. Moreover, each of these two factors are within wide limits capable of being controlled.

Broadly speaking, therefore, the level of prices in this country depends in the last resort on the policy of the Bank of England and Treasury, provided that the Joint Stock banks do not depart materially from their usual "proportions." Mr. Keynes advocates that the deliberate policy of these two bodies, should be directed to maintaining sterling prices at a stable level. He suggests that an official index number of general commodity prices might be adopted as a standard of value in the sense that the authorities would employ all their resources to prevent its movement by more than a certain percentage in either direction away from the normal. The precise composition of this index number could be modified from time to time in accordance with changes in the relative economic importance of the component commodities upon which it is based.[1]

The problem of monetary stabilisation has of course an international aspect. An effort by one country alone to maintain a stable price level, would not free that country from the effects of price instability in other countries ; it would not prevent its foreign exchanges running riot and its foreign trade suffering in consequence. For in the present conditions it would obviously

[1]The development of the general theory of monetary stabilisation also owes much to Prof. Irving Fisher of Yale University. For an account of his proposals for "stabilising the dollar," the reader is referred to his various writings on the subject.

be necessary, in order to stabilise the internal price level, to abandon a policy primarily directed towards stabilising foreign exchanges. If it were the aim to secure both of these objects, monetary stabilisation would have to be carried out on an international basis by the direct co-operation of the respective countries. Such international agreement is at present generally acknowledged to be beyond the sphere of practical politics, and so long as this remains the case, a country such as the United Kingdom must for the present choose between the alternative policies of a stable price level, or stable exchanges.[1]

It would carry us too far afield to go into any detail in regard to this side of the question, notwithstanding the fact that international monetary stability is a matter of the highest importance to the world's agriculture. The Financial Commission of the Genoa Conference held in April, 1922, adopted a series of twelve resolutions on European Currency, in which are embodied an endeavour to find a way out of the present currency entanglements. Though it may be said that the net result of the conference is small, nevertheless in some respects it marks an epoch, for the report embodies the recognition by the thirty-one Governments which were represented at the Conference, not only of the need, but of the means

[1] For a discussion of "stability of prices" *versus* "stability of exchanges" see J. M. Keynes, "A Tract on Monetary Reform," Macmillan, 1923. Mr. Keynes puts forward an alternative method for dealing with the problem of the exchanges, which is described in the book here referred to. A discussion of this would lead far beyond the scope of this volume, since it would involve the question of the gold standard itself. It is hardly necessary to say that the weight of opinion amongst bankers and economists in favour of ultimately returning to a gold standard is very great.

(in a general way) of stabilising prices. Apart from the obvious necessity of eliminating inflationary finance, the two essential things are clearly recognised—(1) that general price changes—as distinguished from the price changes of individual commodities—are monetary phenomena, capable of being regulated by means of the control of credit, and (2) that the control of credit *with this object* or with the object of stabilising the international exchanges is the business of the central banks.

The report of the commission recommended that a conference of representatives of the central banks should be called by the Bank of England, to which representatives of the United States were to be invited. To this meeting was to be referred a scheme proposed by the Financial Commission, dealing with European currency reform. It involved the fixing of the gold value of the monetary unit of each country, the making "effective" of the gold value so fixed "in a free exchange market," together with certain arrangements for securing the convertibility of the currencies of the participating countries. It is not necessary to enter into these details here. The Genoa resolutions however remain important, if for no other reasons, because the calling of an international conference on monetary matters in itself marks a step in advance, and on account of the recognition by the conference of the potentialities, both national and international, embodied in the principle and practice of control of credit.

So much for the monetary side of the question. It has been dealt with at this length because monetary instability has played such an important part in the booms and depressions of the past century, and

has had such paralysing effect in the crisis of 1920. Monetary policy is a question which alike affects all industries. Stability of money is desirable to all people who buy and sell things, who contract loans or debts, or who embark on capital enterprises. To agriculture it is a matter of supreme importance, since the industry can neither escape the consequences of a shifting price level, nor can it survive them as easily as other industries. It suffers along with them, but on the whole suffers more severely. For these reasons (which were analysed in detail in Chapter III.) no less than on account of the universal importance of agriculture in the economic life of nations, it is probably true to say that it affords the strongest argument for monetary stabilisation that can be drawn from any industry in the world. It may be said that monetary stabilisation is beyond the scope of practical politics. At the present moment it would seem that it is so. It is certainly not yet near to being a political question in this country, but when there is greater public appreciation of the immense powers for good or evil which the control of credit provides in a community whose industrial activities rest very largely on credit, and when it is realised how closely the prosperity of industry, and those who are engaged in it, is connected with monetary policy, it may no longer remain in the field of discussion amongst theoretical economists, but may become one of the fundamental questions of public welfare.

From the monetary side of the problem we may now turn to consider the other causes—depending primarily on supply and demand—which affect the prices of farm produce in agricultural markets.

The Stabilisation of Agriculture.[1]

If there is one thing more than another which distinguishes the economic conditions of agriculture from those of other industries—apart altogether from monetary considerations—it is the instability of its prices, the exceptional degree to which they are liable to fluctuate from season to season, and their exceptional sensitiveness to supply and demand. So much is this the case that the farmer is left in a perpetual dilemma. Abundance and scarcity are alike anathema. Abundance brings a fall in price ; scarcity a fall in profits. A fairly uniform yield of crops might give him a fairly stable market, but such uniformity, by the very nature of his occupation, is precisely what he is unable to secure. Weather and climatic conditions play such important parts in regulating yields that every new crop is, in a sense, a fresh speculation. Moreover, the British farmer, working always in competition with produce imported from abroad, suffers not only from favourable or unfavourable seasons at home, but from the same conditions in exporting countries. Added to which the perishable character of some agricultural produce, as well as other conditions, cause the prices of these commodities to be more sensitive to the vicissitudes of the market than perhaps those of any other staple articles, a relatively small surplus will result in a disproportionately large

[1] In the following pages the term "stabilisation" has been retained as it is a word commonly employed by writers on the subjects which are discussed below. It is used, however, in a somewhat looser sense than heretofore ; in the case, for example, of the American Co-operative Marketing Associations, the aim is to eliminate or minimise the *fall* in price of agricultural produce rather than to prevent all price fluctuations, which is not quite the same thing.

drop in prices and vice versa. In short, while supplies of farm produce are very variable, demand is very inelastic.

As an illustration of this sensitiveness, may be quoted the following figures taken from the Report of the Joint Commission of Agricultural Enquiry in the United States, comparing the per capita production of corn (maize) for the years 1890-1920, with the price per bushel :—

Year.	Per Capita Production (Bushels).	Average Farm Price in Cents per Bushel.
1890	23·7	50·6
91	32·2	40·6
92	24·9	39·4
93	24·3	36·5
94	17·8	45·7
95	31·3	25·3
96	32·3	21·5
97	26·4	26·3
98	26·2	28·7
99	27·8	30·3
1900	27·7	35·7
01	19·6	60·5
02	31·8	40·3
03	27·7	42·5
04	29·9	44·1
05	32·2	41·2
06	34·1	39·9
07	29·6	51·6
08	30·0	60·6
09	28·1	57·9
1910	31·3	48·0
11	27·0	61·8
12	32·9	48·7
13	25·4	69·1
14	27·3	64·4

The two consecutive large crops of 1895 and 1896 resulted in a drop of nearly 50 per cent. in the price compared with 1894. A short crop in 1901 caused an

increase of 70 per cent. in the price, while a large crop in the following year resulted in a drop of approximately 33 per cent. Again in 1907 a relatively small crop raised the price by approximately 30 per cent., while in 1908 a substantial increase in production resulted in a decrease of 17 per cent. In the following year a smaller production again raised the price by 28 per cent. A large yield in 1912 caused a drop in price of 21 per cent. while a diminished crop in 1913 raised the price by 42 per cent. All these fluctuations in price, by reason of the large share of the world's total production which America has contributed, to some degree are passed on to the world's markets and ultimately to the markets of importing countries causing prices in these markets to rise or fall in sympathy. Such conditions are responsible for curious anomalies in the marketing of agricultural produce. It has been calculated that American producers of cotton will receive more for a year's crop of nine million bales than for a crop of thirteen million bales. American producers of wheat will receive more for a year's crop of seven hundred million bushels than for a crop of one thousand million bushels.[1]

For reasons such as these, the question of the stabilisation of produce prices in agricultural markets presents a problem in agricultural economics which few others can exceed in importance. Such a conception has undoubtedly begun to receive close study in the United States, and in this country a lead has been given to the wider application of this principle by Mr. E. M. H. Lloyd, in his book on "Stabilisation," to which reference has already been made.

[1] Prof. Lionel D. Edie, "The Co-ordination of Production and Marketing." Chapter V. in "The Stabilisation of Business."

The United Kingdom, as an importing country, is exposed to fluctuations in agricultural prices, arising from two causes (other than monetary):—

1. Variations in world's supplies of those commodities which the United Kingdom mainly obtains from abroad, and

2. Variations in supplies of commodities mainly produced at home.

Consequently, this branch of the problem of stabilisation roughly divides itself under these two heads.

The control of production of an imported commodity such as wheat is obviously out of the question, and in the absence of some international agreement, any measures to stabilise imported wheat prices would have to be applied after the grain reaches this country.

To attempt to overcome by legislation the ill effect of fluctuation in wheat prices is not a new idea; it is as old, indeed older than the Corn Laws. But the policy of sliding scale tariffs, or the subsequent policies of guaranteed prices or subsidies, aimed not so much at preventing these fluctuations, as at enabling the farmer to survive their consequences. The advantages and disadvantages of this policy are too well known to need any repetition here; in any period of agricultural depression, the case for direct financial assistance from the State can be argued, but in the past, as a matter of historical fact, it is a method which has broken down for the reason that it has been found to impose on the general community an unreasonable burden. Is there an alternative? Can a method be found which escapes this obvious disadvantage?

During the latter years of the war and immediately following it, the general state of disorganisation com-

pelled this country, no less than Canada, Australia, and the United States of America, to adopt in one form or other the principle of collective purchase or sale of raw materials. Thus in the United Kingdom the whole of the imports of British wheat was purchased through the Wheat Commission. In Canada the exportable surplus of Canadian wheat was purchased at fixed prices for re-sale to the Inter-Allied Wheat Executive, by a Government institution—the Canada Wheat Board. Australia adopted this principle in respect of wool and wheat, and through co-operative organisations in respect of fruit and other produce. Even Russia and the Argentine were no exceptions to this widespread movement. To the grower these arrangements brought immediate advantage. He knew at once where he stood in regard to the prices of his produce. The "pools" paid for the crops at fixed prices. Speculation was entirely eliminated and, in conditions of great economic uncertainty, prices were stabilised. The circumstances of the war, no doubt, made it easier to establish these systems, inasmuch as the aim of Governments at the time was primarily to secure continuity of production. They were not so much concerned with whether their operations resulted in a profit or a loss. Nevertheless, their economic consequences were far-reaching; they spread stability and confidence throughout the industries with which they were concerned at a time when practically no other mechanism could have been devised to do so.

Can these methods be applied with the necessary modifications in time of peace? That is a question which has been asked in more than one agricultural country. Could we in England secure greater stability

in the British wheat market by re-establishing machinery on the lines of the Wheat Commission? Could we apply the experience of collective trading during the war to the direct object of stabilising prices in times of peace?

In essentials, this is the proposal which has been put forward by Mr. Lloyd.[1] It is a scheme which would mean the exclusion of the private purchaser of foreign wheat and the concentration in the hands of one authority the whole business of importing wheat into this country. While the authority would buy at the world prices, it would, by averaging out these prices, setting a year of low prices against a year of high prices, sell in the British market only at fixed prices based on these averages. By means of its statistical knowledge of the world's crop production and the average world prices of wheat for the preceding years, it would arrive at a forecast of the probable course of world prices for the next few years, and upon all these data would fix the price at which imported wheat would be sold in this country for as long a period as seemed justified.

A similar proposal was developed in somewhat greater detail in an article recently published in the "New Leader."[2] In principle the plan is the same. It aims at stabilising the price of wheat in this country, and at protecting British agriculture from the evil consequences of fluctuations in the world price of wheat without imposing any additional burden on the community as a whole. The importing authority would, under this scheme, be a Wheat Corporation established on similar

[1] "Stabilisation," pp. 100-3.

[2] An article by "Realist," August 24, 1923.

lines to the Wheat Commission, through which the whole of the wheat imports would be purchased, import on private account being prohibited. The Corporation would be a public body, incorporated by Act of Parliament, and financially guaranteed by the Government, aiming neither at profit nor loss, whose purpose would be to sell the wheat imported through its agency, not at world's prices but at a price which would represent a long period average of world's prices. The Corporation would be a State institution subject to State control, but its operations would be purely those of a commercial undertaking such as any privately owned importing house. "When the Wheat Corporation had been operating for a few months and had had long enough to gauge the market and estimate the probable future course of prices, it would announce the fixed basis of prices at which it would sell imported wheat for a definite period ahead. At first this period might be six months or a year; but gradually as experience was gained, the period might be extended to three years or *even five years ahead.*"

When the world's price of wheat was unduly depressed —as at present—the Corporation would sell above the world's price and would make a profit; when they were high it would sell below the world's prices and would make a loss. What the miller would pay in the long run would be the average of the world's price—neither more nor less. The periodic readjustment of the price of imported wheat according to whether the Corporation's trading operations at the end of each period, showed a loss or a profit, would in normal times only be small, and, theoretically, there would seem to be no reason why this scheme should not—as its advocates

claim—succeed in eliminating, or at least, in modifying, fluctuations in imported wheat prices.[1]

With the political aspect of the application of such a proposal as this, we are not concerned; it is referred to here—however remote its practical realisation may be—solely because it is a scheme aiming directly at the stabilisation of wheat prices—seeking to eliminate price fluctuations by applying to importation precisely those principles which, in their application to home and export trade in America and elsewhere, have proved so successful.

Mr. Lloyd carries the conception for collective trading to its logical, if perhaps to a less practicable conclusion. He foreshadows the formation of an *international* wheat pool "in which Governments, farmers' co-operative societies, and perhaps even milling combines would participate." The pool would aim at an effective control of the world's wheat market, at eliminating world price fluctuations by holding large reserve stocks, and at meeting seasonal or cyclical variations in demand by increasing or decreasing its reserves. It would aim at co-relating the wheat production of all exporting countries, and finally at fixing the price for a period of years ahead, not only to the consumer but also to the grower.

What applies to wheat applies also, at least in principle, to other imported commodities. In two articles by "an Australian Correspondent," published in "The Times" on August 14 and August 15, the question of the stabilisation of prices by means of collective purchase and sale was again put forward. "Practical stabilisation

[1] This proposal has now been officially adopted by the I.L.P. as part of their agricultural programme.

could be carried into effect," the writer says, "by a comparatively simple system. It is generally realised that any scheme to make farming profitable entails some form of authority to regulate and, when necessary, to restrict foreign imports. It seems probable that the control of supplies from foreign countries could be managed in such a way as largely to eliminate fluctuation without having to apply any regulations to the produce of Britain or of the Dominions. Every effort should be made to induce the British farmer to co-operate and to produce and market on a sound economic basis, but it would not be necessary to interfere with his marketing.

"The Dominion Governments would be asked to organise their export trade to Great Britain in foodstuffs and agricultural raw materials and to concentrate the whole volume in the hands of a single co-operative exporting agency which should handle the whole of each Dominion's exports to Britain. If possible the Dominion exporting agencies should be federated."

The writer goes on to outline the operations of such a federated organisation, and advocates the formation in this country of a National Purchasing Board to buy all imported agricultural produce. The Board would "buy in seasons of plenty and store for seasons of dearth with the definite object of avoiding conditions which would cause fluctuations of value."

Lastly, a proposal not dissimilar to these was put forward by the Rt. Hon. S. M. Bruce, Prime Minister of the Commonwealth of Australia, in his speech to the Imperial Economic Conference, on October 9, 1923. He approached the problem from a slightly different angle, but, in substance, he advocated that foreign

supplies of wheat or meat should be purchased through a National Purchase Corporation, whose function it would be to "buy from foreign countries the shortage between what the British and the Dominion producer could supply, and the total requirements of the country." The essence of Mr. Bruce's plan was to control the rate of delivery of foreign wheat into the British market through the agency of the National Purchase Board, so that fluctuations in prices might be largely eliminated.[1]

These proposals were referred to the "Food and Materials Committee" of the Imperial Economic Conference, who considered them open to a number of objections. They believed that the plan would lead to an "irresistible demand for price control," that it would be tantamount to protection plus licences, and consequently, would be open to the specific objections to a licensing system, which the Committee enumerated in their report, and that it might ultimately lead to the State "taking over every phase of the business of marketing." These are criticisms of Mr. Bruce's proposal, and not of the principle of centralised purchase in general. Nevertheless, it is, at least, not easy to see how the Committee's conclusions were arrived at.

How far the principle of centralised purchase could in practice be developed to cover the majority of imported agricultural produce, as suggested by "The Times" correspondent quoted above, is a matter which would take too long to discuss in detail; moreover, its political implications would obviously be very far-reaching, indeed revolutionary. The essential point,

[1] "Imperial Economic Conference; Record of Proceedings and Documents," p. 81.

however, for the purposes of this discussion, and one upon which authorities in a number of different countries are coming to agree, is that collective trading applied to agricultural commodities is a proved instrument of stabilisation.

There are, however, two objections of a much more important character than those raised by the Food and Materials Committee of the Imperial Economic Conference, namely :—

1. The effect on world's prices of concentrating in the hands of a single agency the purchase of the whole of the British requirements of imported wheat, and

2. The degree to which this method of trading might be exposed to political pressure at home.

For example, if the British buying authority held off from the market in anticipation of a fall in world's prices, or began buying in anticipation of a rise, it might have the effect of severely accentuating the fluctuations in world's prices, and might even lead to political pressure being exerted on the British Government by, say, the Government of the United States. If such were actually the case, it might easily involve many disadvantages to this country. On the other hand, advocates of this system believe that the particular objection here referred to, could, without difficulty, be overcome by the appropriate direction of the buying operations, by long period contracts, continuous buying, or other methods. It would, in short, be a question of buying policy. As regards the second objection, it is beyond doubt that these proposals would require some considerable degree of willing support, on the one hand from the British farmer, and on the other from the consumer, otherwise the system would be open in a special degree to the kind

of political pressure which might render its successful administration impossible. General confidence in its impartial management, and in the principle of averaging world's prices, would be an essential condition. Unfortunately on such matters public opinion is frequently not a little fickle.

For example, when world's prices were low, and imported wheat was, in consequence, being sold in this country above the world's prices, it is not difficult to imagine that there would be those who, claiming to represent the interests of the consumer, would look upon the scheme with strong disfavour, pointing out the hardships and injustice which this disparity in prices involved to the general public, and would accordingly seek from the Government its abolition. On the other hand, there would be those, representing the interests of the farmers, who would regard the scheme with a no less degree of approval, and would, on their side, endeavour to secure its continuance. When, however, world's prices were high, and imported wheat was sold *below* these prices, these two groups would, no doubt, have changed over into the opposite camps, but it is no less easy to imagine that the controversy would remain, and public pressure might even reach a point at which some Governments might find it difficult to resist. When public opinion is able to rest content in the knowledge that an average price *is* an average price, that what is lost when world's prices are low, is gained when they are high, one of the chief obstacles to the application of this method of price stabilisation might be removed.

It is to be presumed that its advocates seek to secure by this system of trading, a wider stability than merely that of British wheat prices. If the latter were the only

object, it would seem to be easier to apply the method to the British wheat crop itself, which is the thing to be stabilised, rather than to the enormously greater volume of imported wheat with the object of indirectly affecting the price of the home-grown product. A British wheat pool, somewhat on the lines of the Canadian or Australian wheat pools, which bought from the British farmer at an average price (announced beforehand) and sold to the miller at the prevailing market price, subject to periodic adjustments of the flat price from time to time (as in the importation scheme) would seem to be able to achieve the same object—at least theoretically—without incurring the special difficulties referred to above.

From the question of importation we may turn to home production, for we have not yet reached the end of the preventable oscillations of wheat and other agricultural prices. Where imported produce dominates the home market, as in the case of grain, the market prices are necessarily subject to the fluctuations of world's prices ; but whether or not home crops are produced in competition with imports from abroad, the rate at which the former are supplied to the market exert a profound influence on the prices which growers are able to realise.

In their "Interim Report on Cereals, Flour, and Bread" the Linlithgow Committee called attention to the seasonal fall in wheat prices occurring at each harvest. "We have been impressed," the report states, "by the losses which farmers frequently sustain by selling their grain immediately after harvest in order to raise cash for various essential transactions, such as the purchase of stock for winter feeding. This causes a glut on the

market in the autumn, and farmers who press the sale of their produce at that time have, as a result, to take what has been described as a 'terrible discount'."[1]

Such seasonal fluctuations are of common occurrence, not only at the present, but in normal times, and not only in this country, but in the United States and most other agricultural countries, and they have frequently been referred to in recent writings on the economic organisation of agriculture in America.

That the causes of the seasonal drop in prices is partly financial, that is to say, is a direct consequence of the farmer's need for money, is beyond doubt. Pressed to find the means of financing his subsequent operations or of meeting his current liabilities, the farmer tends to unload his produce on to the market at the earliest opportunity. It has been estimated that in the United States 70 per cent. of the cotton crop is marketed between the beginning of September and the end of the year, and 65 per cent. of the wheat crop in the months of August to November. The position in this country is hardly less remarkable.

The following figures based on statistics published by the Ministry of Agriculture, gives an estimate of the proportion of the British wheat crop sold between the beginning of September and the end of December for each of the years 1911, 1912, 1913, 1920, 1921, 1922:—

Year.	Per cent. of total crop sold in September-December.
1911	46
1912	37
1913	44
1920	46
1921	49
1922	48

[1] "Interim Report of the Departmental Committee on Distribution and Prices of Agricultural Produce—Cereals, Flour, and Bread," p. 33.

The diagram given on page 76 shows the course of the index figure for the price of British wheat in each month from January, 1920, to September, 1923. In the first two years represented in this diagram the course of the price curves were so complicated by the effects of monetary deflation, the release from control and other causes, as to obscure the seasonal movement, but in 1922 and 1923 the wheat curve will be seen to take a sudden drop at the harvest. It is necessary to realise precisely what this means for it is an important economic consequence of the present agricultural depression. The index figure represented in this diagram is a figure giving the percentage by which the price of wheat for each month had increased above the average of the *corresponding months* of 1911, 1912, and 1913. The index figure is calculated on this basis in order to eliminate the effect of *normal* seasonal fluctuations in price; nevertheless, in the post-war period the curve shows a drop at the harvest. In other words, the seasonal depression of prices has been greater than pre-war, during the period of the present agricultural crisis. Nor has this phenomenon been a peculiarity of the wheat market; the same aggravated seasonal fall in price occurred with other crops. The following figures give the percentage seasonal fall or rise in price for wheat and oats for the years 1911, 1912, 1913, and 1921, 1922 and 1923—

Percentage Increase or Decrease in Price between July and October.

	1911.	1912.	1913.	1921.	1922.	1923.
Wheat .	+ 1·8	− 16·4	− 7·5	− 39·2	− 25·4	− 20·7
Oats .	+ 1·3	− 18·1	− 12·3	− 29·8	− 22·7	− 20·2

The corresponding drop in the British prices of imported wheat and oats, for the sake of comparison, is given in the following figures for the years 1921-23 :—

Percentage Increase or Decrease in the Price of Imported Wheat and Oats between July and October.

	1921.	1922.	1923.
Wheat (No. 1 Manitoba) .	– 29·94	– 8·53	+ 1·51
Oats (Canadian Feed) .	– 12·15	+ 1·16	+ 1·21

There would seem to be only one explanation.[1] A period of financial stringency, when the farmer is unusually pressed for money, compels him to resort to the marketing of his produce at the first opportunity and thus tends to emphasise the seasonal fluctuations in prices. He is forced by the pressure of economic conditions into a vicious circle. The low prices and low profits prevailing throughout the industry restrict his working capital, he is compelled to raise money on his produce, he overloads the market, and consequently causes a still further depression of prices. In the crisis following the war this seems to have been exactly what happened. Plunged into a period of general industrial depression in this as in other countries, farmers were at once confronted with a desperate delemma. Like all other traders they soon felt the effects of shortage of available cash and perforce were driven to market their produce. At a moment when to preserve the stability of the market was to all alike a matter of vital concern, their combined efforts destroyed it. With one accord they unloaded their

[1] It has been stated that since the war, millers have tended to carry much smaller stocks than was their custom in pre-war days, a circumstance which might have the effect of accentuating the seasonal fall in wheat prices.

stocks, and in their extremity were compelled to take an even more "terrible discount." How different might the course of events have been, had it been possible for their combined efforts to have worked in the opposite direction; had they been able to supply the market according to its needs and thus to secure to the farmer the full reward for his labours! It is precisely to this point—stabilising the internal agricultural markets—that recent development in co-operative marketing in America has been directed, and it is on account of the widespread success which has attended this movement that it has become perhaps the most significant development in the history of agricultural organisation during the last fifty years. To this development further reference will be made below.

It would be a mistake to assume that the policy of marketing wheat in large quantities immediately after the harvest is wholly to the farmer's disadvantage. There are technical as well as economic questions which have a bearing on it. On the one hand, there is the question of the improvement in quality of wheat with keeping, on account of the reduction in its moisture content; on the other, the dangers from deterioration due to attacks by vermin, and the cost of storage of the grain if not marketed at once. Moreover, the wheat market is at all times to some degree speculative. But the fact remains that the seasonal fall in prices referred to by the Linlithgow Committee is a well-recognised occurrence in wheat-growing countries, and a heavy depreciation of price on this account must, in the aggregate, involve very serious losses to the growers.

With other commodities the seasonal drop in price is again apparent, with a tendency to exaggeration after the war. Eggs and poultry (fowls), for example, each show a

seasonal fall in price of 30 per cent. or more, for each of the years 1921, 1922, and 1923; and the same phenomenon also occurs with the more perishable crops such as fruit, vegetables and potatoes. The fall in egg prices, due to this temporary glutting of the market, recurs from season to season with such regularity, that it may be worth while to quote the actual figures. The following table gives the average prices per dozen of first quality eggs for each month of 1911-13, and 1921-23:—

Month.	1911.		1912.		1913.		1921.		1922.		1923.	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
January .	1	4¾	1	5¾	1	4	4	1½	2	11½	2	6¼
February .	1	2¼	1	4½	1	3	3	4¼	3	3	1	10¼
March .		10¾		11		11¼	2	2	1	9½	1	5¼
April .		10		9¾		10¼	1	11¼	1	6¾	1	1½
May .		10		10¼		10¾	1	9	1	4¼	1	2¾
June .		11		11¼		11½	2	4¼	1	6½	1	3¾
July .	1	0½	1	0½	1	1¼	2	6	1	10½	1	4¾
August .	1	1¾	1	2	1	2½	2	11¾	1	10¾	1	11¾
September	1	2¾	1	3½	1	3¾	2	11¼	2	5	2	2
October .	1	6¼	1	6	1	6	3	7½	2	11½	2	9¼
November	1	11½	1	9¾	1	11¾	4	6½	3	7¾	3	5½
December .	1	11	1	9	1	11	4	2½	2	11	3	3

Furthermore, the prices of these products are liable to fluctuate, not only for the reasons which have just been described, but also on account of "over-production." Potato growers in this country—to take another example—have many reasons to lament the abundant crop of 1922, while the effect of very large fruit crops is only too well known. The case of fruit and vegetables is referred to in the interim report of the Linlithgow Committee[1] in the following passage:—

[1] "Departmental Committee on Distribution and Prices of Agricultural Produce—Interim Report on Fruit and Vegetables," p. 24.

"We have already pointed out that the total production of fruit and vegetables in this country is subject to considerable fluctuation from season to season, to some extent owing to variations in the area of cultivation, but chiefly owing to natural causes. . . . The public demand for perishable goods is not easily adaptable to wide variations in supply. A prolific year, for example, may yield crops far in excess of the demand, and the constant pressure of surplus produce on a sensitive and already satiated market, may cause prices to slump to a lower level than is sufficient to reimburse the grower for his costs of production and of marketing."

The violent fluctuations in the areas under cultivation with the consequent effect on prices, to which vegetables—more perhaps than any other class of agricultural produce—are liable, is another cause of instability and is largely brought about by a misconception amongst growers of the real cause of a rise or fall in prices. A short crop and the resulting high prices induce growers to plant a larger area; the larger crop thus produced often causes a fall in prices; the area cultivated is once more contracted and prices again rise. The following figures may be taken as an illustration of this:—

Acreage in England and Wales and Average Prices of Carrots, 1920-23.

	Acres.	*Price per Cwt.*
		s. d.
1920	9,628	5 9 (Sept. 1920 to end of season).
1921	8,224	13 7 " 1921 " "
1922	14,084	2 11 " 1922 " "
1923	10,107	7 8 " 1923 to February, 1924.

The 1921 carrot crop was short, and scarcity led to a considerable advance in price. Although this was obviously a temporary condition, growers were induced—apparently by the expectation of a continuance of high prices—to expand the area under cultivation by no less than 71 per cent. The increased area and high yields in the following year led to a "surplus" with the consequence that prices slumped from 13*s.* 7*d.* per cwt. to 2*s.* 11*d.* per cwt., a fall of 78 per cent. The history of potato prices in this country provides many similar instances. Thus the unregulated interaction of supply and demand plays havoc with agricultural prices, and the unfortunate grower, ever pursuing his individualistic policy and disregarding the actions of his neighbours, is again and again the victim of circumstances which his own isolated and uncoordinated action has helped to bring about.

Such causes of instability, in a greater or less degree, attend agriculture in all its branches, making farming operations overwhelmingly more difficult, and involving in the long run not only financial losses to the farmer, but economic wastage to the whole community.[1] Fluctuation of prices in the internal agricultural markets, no less than fluctuation arising from monetary causes, is one of the farmer's chief enemies. How to counteract this instability, how to prevent excessive price variations may be described, not without exaggeration, as *the* problem of agricultural economics. What is the solution?

To all these questions America has turned with an enlightened mind, and with characteristic energy; and it

[1] For some account of the fall in agricultural prices due to these causes, before the war, see "The Report of the Land Enquiry Committee," 1913.

may be worth while to consider, shortly, the attempts which have been made in that country to deal with these problems, and the measure of success which has attended them.

Recent development in co-operative marketing in the United States mark an epoch in agricultural organisation.[1] Although it would be impossible here to give even the shortest outline of the history of this movement in America, it is necessary to a proper understanding of its recent advances to know something of the steps by which it reached the position it had attained at the outbreak of the European War. As in other countries the movement had passed through an experimental stage, a period of trial and error, out of which it has emerged with certain definite principles, the direct result of practical experience. Once these principles had been established, once their application was recognised as a means of overcoming the special economic disabilities which throughout the world attend the marketing of agricultural produce—it was given an impetus which has made it the dominant movement in American agriculture.

Co-operative marketing in the United States started with dairy produce in the early part of the nineteenth century. It passed through a phase when it formed part of what was known as the "Granger Movement," founded in 1867, and the period between that year and 1880, saw the rise and fall of innumerable co-operative enterprises engaged in the marketing of grain, cotton, live stock, tobacco, wool, and other produce. A failure to meet the real economic needs of agriculture, combined

[1] For a full account of this subject, see "Co-operative Marketing," by Herman Steen.

with radical mismanagement brought this movement to sudden collapse, just as in Europe the application of the so-called "Rochdale" principles to the marketing of farm produce—i.e. the marketing of a large number of agricultural produce through one association—led to an almost equally conspicuous failure.

It was not until the first of the now well-established principles began to be applied—namely, co-operative *commodity* marketing—that the movement definitely emerged from the period of many costly failures and disappointments into one of sound commercial well-being. The principle of organising co-operative marketing by commodities is the foundation upon which the whole of the subsequent structure has been erected. It turned the movement from uncertainty to success, just as in Denmark the adoption of the same principle proved to be the beginning of almost uninterrupted progress in that country. The governing principles which in its subsequent development have by degrees become recognised, may briefly be summarised as follows :—

1. Each organisation must be concerned with the marketing of a single commodity or commodities closely allied with each other ; it must cover a wide producing area, the local units being federated to some central body in order to secure adequate control of the market.

2. It must be based on binding contracts under which the growers pledge their produce to the association for a term of years.

3. It must embody the principle of "pooling," according to size, grade or other characteristic, so that whilst individual growers obtain returns in proportion to the amount and quality of their produce, the control

of sales passes from these thousands of growers into the hands of one organised unit.

How these principles came to be evolved may be illustrated by examples from what actually occurred. Growers of citrus fruit were among the pioneers of the American co-operative marketing movement. The first attempt at co-operation in this trade dates back to the early days of commercial orange production on the Pacific Coast. Between 1877 and 1890 there was a very rapid development in the orange trade in California which soon resulted in "over-production"—there was a "boom" which was speedily followed by a general fall in prices. After an abortive attempt at self-protection through the agency of the Orange Growers' Protective Union, the growers turned to co-operation. The actual beginning was marked by the organisations of the Pachaffa Orange Growers' Association in 1888. Other local associations quickly sprang up, and succeeded in maintaining a successful trade in the years immediately following, and during the early 90's. They were, however, hardly more than local marketing agencies disposing of their members' fruit in each district independently.

The next step was the establishment of district exchanges in each of the chief citrus areas operating in conjunction with the local growers' association. But the organisation of local associations and district exchanges was not enough. It gave the growers no real control over the marketing of the fruit, one association competed against another, and the market still tended to be flooded at the time of harvest and prices, consequently, to be depressed. Growers therefore sought to federate the local associations through one central body, and ultimately, in 1905, the California Fruit Growers'

Exchange, the central marketing authority for the united organisation, was established. Thus the last link in the chain came to be formed ; federation proved to be the way to success, and with the advent of the California Fruit Growers' Exchange the co-operative organisation for the first time obtained a commanding position in the citrus fruit market. This exchange has dominated the market practically since its inception, and with its formation the general structure of the marketing organisation —viz. local associations, district exchanges, central exchange—was complete. Upon this pattern the whole organisation as it exists to-day has been built up, and it remains a model to the world. At present there are 10,700 growers each contracting to deliver the whole of his citrus fruit produced for the market, to the local association. There are 206 local associations concerned primarily with grading and packing, 19 district exchanges whose chief function is directing the fruit received from the local association to the markets, and finally the central co-ordinating body—the California Fruit Growers' Exchange. Upon the latter by reason of its commanding position falls the task of controlling distribution, of preventing congestion, and thus of securing to the grower what is the real achievement of this organisation—a stabilised market.

The second of the principles referred to above, viz. long-term producers' contracts, was evolved largely as a measure of self-protection. Many co-operative enterprises had in the earlier stages of their existence to withstand attacks from private dealers who endeavoured to tempt producers out of the organisation by temporarily offering high prices for their produce. It was precisely this difficulty which confronted the Danish co-operative

movement in its earlier years, in fact, the long-period producers' contract applied to co-operative marketing, is a Danish invention, from which country it was adopted by the United States. Producers' contracts were first used in America by a Farmers' Elevator Co., in Iowa, in 1889: they were adopted by the California orange trade in the early 90's, and at the present time have become almost the universal practice of co-operative undertakings in that country. The advantage of the contract system was not confined to eliminating the disruptive attacks of outside dealers. It increased the power of the co-operative organisation to control the markets, since the volume of produce to be handled was fixed within comparatively narrow limits, thus enabling the marketing policy to be developed with a fairly definite knowledge not only of the present, but of the future supplies of fruit to be dealt with.

Lastly, the principle of "pooling" has with one or two exceptions become the recognised practice of American co-operative marketing associations. Its adoption has also been an outcome of practical experience; it has been found that it both cheapens the operations of grading and packing, and enables an association to establish a reputation for its products in the market, to reduce wastage to a minimum, and to handle the various grades more easily. Pooling usually consists not merely in the physical mixing together of the growers' produce according to grades, but of the equalisation of the profits realised upon sales, amongst the members of the association. Moreover, like the producers' contracts, it has a special economic advantage. It greatly facilitates—indeed it is essential to—the exercise of the association's full powers of control over the movement of produce to

the market, and it has consequently come to be recognised as one of the primary instruments of market stabilisation. To quote Mr. Steen :[1] "Pooling is the corner-stone of the merchandising plans of all the American co-operative associations that are organised on the commodity-wide basis."

With co-operation established on these principles, American agriculturists have sought to apply it on a wider scale, in remedying the specific economic difficulties which have been described in the preceding pages—the seasonal variations in prices, and other variations due to a temporary excess of supply over demand. The real significance of the American co-operative marketing movement is that it has proved to be an effective means of remedying these fluctuations, when no other method has been capable of overcoming them. The depression of 1920 brought economic questions to the forefront of agricultural problems. Farmers who were impoverished by the general fall in prices, were compelled to pay more attention to the circumstances attending the distribution of farm produce than had previously been the case. In unorganised marketing they perceived a definite source of loss, and in what is now called "orderly marketing," the remedy.

The seasonal drop in prices at harvest time was well recognised to be largely due to financial causes—i.e. to the farmer's need for ready cash.[2] This need, in fact, lay at the root of the whole question ; it was from one point of view the crux of the marketing problem, because in the past, having no course open to him but

[1] "Co-operative Marketing," p. 321.

[2] It has been estimated that only 12 per cent. of American farmers are able to finance their own crop raising.

to sell his produce outright for what it would fetch, he had remained a helpless victim of the seasonal slump in prices which not infrequently fell below the cost of production. Co-operative marketing, properly organised, was seen to be a method which at once solved the financial difficulty, and at the same time could be used to prevent the glutting of the market and the consequent drop in prices. It was an instrument of stabilisation, and the only one which lay within the direct control of the growers themselves.

As the economic value of co-operation has become increasingly realised American co-operators have primarily sought to secure through these organisations two things, (1) the collective control of the movement of produce to market, on a scale sufficient to give the co-operative undertaking a predominant position in the market, and (2) power to obtain bank advances by using the commodities themselves as collateral, thus enabling the co-operative association, in turn, to make advances to the grower. In practice it has involved an intermediate stage between the producer and the consumer in which the product is put into store—in the case of certain perishables into cold storage; and in the case of non-perishables into warehouses or other stores. Upon warehouse receipts the banks have been ready to make advances to co-operative marketing associations, on the same lines as has for many years been their practice in the case of wheat stored in elevators and cotton in warehouses. The association is thereby enabled to make an immediate advance to the growers—up to 50 or 60 per cent. of the market price—and still to retain the vitally important control of the rate at which the produce is moved to the

market. Once this system becomes effective, stabilisation follows. Distribution becomes orderly and less wasteful, prices steadier and profits on the whole more remunerative.

In the practical application of this system, the question of credit necessarily becomes an important factor, and the provision of short term credit to facilitate marketing operations has been fully recognised in America as one of the chief needs of agriculture. On this particular point the machinery of co-operative marketing associations proved, in the crisis of 1920 and 1921, to be of almost incalculable service to American farmers. The financial pressure upon farmers from banks, landowners, merchants and others, might have led to a severe glutting of the market, and where marketing was unorganised, this is what actually happened, but in the case of co-operative associations, able to command the necessary storage capacity, advantage was at once taken of the short-term credit facilities provided by the Government through the machinery of the War Finance Corporation (see Chap. III.), and a very considerable measure of relief was thus obtained.

During the 1921-22 season the Corporation authorised loans amounting to no less than $64,000,000 to co-operative marketing associations, and in the following season similar loans were approved to the extent of $114,000,000 "to assist in the orderly marketing" of the 1922 crops. One quotation may be given from the annual report of the War Finance Corporation for the year ending November 30, 1922, to illustrate the effect of these operations: "In the midst of the worst depression that the cotton industry has suffered in many years, it was through the co-operative marketing associations that the War Finance Cor-

poration developed plans for extending assistance to the industry on a comprehensive scale. In the summer of 1921 when . . . business throughout the Cotton Belt was in a demoralised condition, the Corporation made its first large loan to an association in Mississippi on 100,000 bales of cotton. The cotton was classified by the association according to grade and staple and placed in bonded warehouses. . . . The loan enabled the association not only to make advances to its members for their urgent financial needs but also to market the crop through a greater portion of the consuming year instead of forcing it on a demoralised market."

Credit on the security of warehouse receipts thus meets one point in the technique of stabilising agricultural markets through the instrumentality of co-operative marketing associations; the control of the movement of produce to the market meets the other. In this direction the most significant advance has occurred in the case of perishables. In those organisations where the development towards Federation has reached the point of giving them a commanding position in the market, control of the movement of produce has become a systemised practice. Although production necessarily varies with seasonal conditions, it has become possible through co-operative enterprise to secure that the rate of delivery to market is determined by the demand of the market and no longer by the rate of production. This function is performed in the case of the Californian orange trade, by the California Fruit Growers' Exchange. In the case of butter and cheese—to take another example—the rate of production steadily rises during the first half of the year to a peak in June and thereafter declines to a low point in December. From

about the middle of April to the end of August there is consequently a definite "into storage" period during which the association receives from producers more than it sells, and from the beginning of September till the middle of April an "out of storage" period during which these conditions are reversed. Thus the market is supplied according to its needs and fluctuation in prices reduced to a minimum.

Outstanding amongst the marketing problems in the United States which, from this point of view, still remains unsolved, is that of wheat. It is one upon which the widespread depression in the wheat-growing areas and the heavy losses incurred by farmers have recently focused a great deal of attention. What has followed is instructive.

Marketing wheat in the United States is a highly organised business. The system of bulk handling, storage in elevators, and bank credits, combined with highly skilled technical management has led to an organisation in some respects without parallel in the world. But it is not an organisation built up on the principles which American agriculturists describe as "orderly marketing;" it does not embody those elements by which alone stability of prices can be secured. Fundamentally the wheat organisation has been developed round the "speculator," the person who buys from the farmer at harvest time when the grain comes into the market in a greater volume than the current consumption needs, and sells it again after the flood is over, a person to whom fluctuations in price are not necessarily an evil and may even be a source of considerable profit.

By many American authorities on the wheat trade, it has been recognised clearly enough that collective trading

provides the safest means of securing a stable market, but opinion has been divided as to the best means of applying this principle. Two proposals (amongst others of less importance) have been put forward, one depending on a system of State or centralised purchase, the other upon co-operation. In February, 1923, a Bill was introduced into Congress providing for a "Wheat Stabilisation Corporation" with a capital of $300,000,000 to maintain the price of wheat at $1·75 for three years. The Corporation was to control warehouses and elevators, and imports were to be prohibited. The Bill was rejected by Congress, but the proposal is still being pressed in many quarters. The wheat growers of the Pacific North-Western States at a conference on August 13, 1923, urged the formation of a Federal Wheat Purchasing Corporation to buy wheat at $1·5 per bushel, and a conference of bankers and agriculturists at Minneapolis met on August 28 to discuss the scheme. According to the "Commercial and Financial Chronicle" "the plan was to have the United States Grain Corporation[1] revived, or a similar agency created, which would buy enough wheat to limit the market to a domestic consumption basis, and dispose of this wheat, the national surplus, to Europe at the best price it can get."

The importance of the proposal is that internal stability would be secured—as it were—by a stroke of the pen. The grain trade would revert to the condition which existed during and after the war; the national pool would be restored; private speculation on the interior wheat market would cease; and the farmer would have a fixed price upon which to lay his plans.

[1] The Government central purchasing agency which operated during the latter part of the war and the first years of peace.

The alternative is a development of co-operation.

A movement for the co-operative ownership by farmers of grain elevators has made considerable progress since its inception in the latter part of the nineteenth century, but its success has necessarily been only a partial one. It has enabled farmer members to obtain credit on their produce, and to this extent has rendered an important service, but it has not achieved its ultimate object. The flow of grain to market still continues in a disorderly fashion and prices tend to fluctuate as widely as ever. The bulk of the crop is still sold in the months immediately following the harvest, the farmer having to be content with what he can get for it.

The movement is clearly in a transition stage ; it has not gone far enough to command the market, and consequently growers, whether co-operators or not, are still the victims of these oscillations in price. The position, in short, is not unlike that of the California fruit growers before the formation of California Fruit Growers' Exchange. Federation of the separate units has not yet been achieved, nor have the other cardinal principles of co-operative marketing been fully developed. The keystone to the complete structure is still wanting.

The first attempt to apply to wheat the principles so successful in the marketing of citrus fruit was made by the North-West Wheat Growers' Association in 1920. The scheme created marketing associations in each of the three States, with a central agency to co-ordinate their activities. A subsidiary corporation was to own the necessary warehouses and elevators, and bank loans were to be provided against warehouse receipts. Difficulties were at first encountered in the matter of long-period contracts, but in May, 1920, 25,000,000 bushels

were contracted for, for periods of five years, and in 1922 this figure had increased to approximately 40,000,000 bushels. Other attempts at co-ordination have followed including the formation of the United States Grain Growers Inc., but up to the present the volume of grain handled by co-operative organisations is only a fraction of the total, the grain sold through speculative middlemen still retaining command of the market.

The continued depression in wheat-growing districts, and the increasing political pressure which was being brought to bear on the United States Administration, recently led the President to appoint a Commission consisting of Mr. Eugene Meyer, Jnr., and Mr. Frank W. Mondell of the War Finance Corporation to investigate the wheat situation. The commissioners examined various proposals, including an increased tariff on wheat; Government control of prices; Government purchase of "surplus" wheat, and others. Their conclusion may be given in the words of their report, "Co-operative marketing associations organised along sound lines and with competent management and business guidance, offer, at the present time, in our opinion, more promise of helpful results than any other plan or programme that has been suggested. They can do what the speculator cannot with safety be relied upon to do. They can by orderly marketing regulate the flow of wheat so that supply is adjusted from time to time to the consumptive demand." [1]

Co-operation is, in short, daily becoming more widely recognised as the cure for fluctuations in wheat prices. That it has not advanced further is partly due to the fact that the principles of co-operative commodity

[1] "Report to the President on the Wheat Situation," by Eugene Meyer, Jnr., and Frank W. Mondell, p. 8.

marketing have not been strictly applied in the case of grain, and partly to the practical difficulties in consequence of the organised opposition of private traders and commission houses being greater than in other branches of agriculture. But with the greater knowledge of the economic conditions of grain marketing there would seem every reason to believe that these difficulties will eventually be overcome. The progress of organisation of wheat marketing in the United States during the next years can hardly fail to be one of the most interesting, possibly one of the most far-reaching experiments in co-operation in any country in the world.

It is not possible to describe here how these principles have been applied in other branches of agriculture, but there can be no doubt that its success during the critical period of 1920-22 has been the reason of the subsequent very rapid growth of the co-operative marketing movement. In 1922 the turnover of American co-operative marketing enterprises was no less than 1,000,000,000 dollars, a five-fold increase within a decade. Every major farm product is now successfully marketed through co-operative organisations, ranging from a small proportion of poultry and vegetables up to 75 per cent. of American grown citrus fruits, 90 per cent. of the dried fruits, 70 per cent. of the tobacco, while they also deal with 25 per cent. of the milk and milk products, and 20 per cent. of the cotton. In all about 1,200,000 farmers belong to these commodity organisations, the cotton associations of the South—to take an example—having alone a membership of more than 200,000.[1]

[1] See "The Statist"—article on the "Growth of American Co-operative Marketing," November 24, 1923, p. 710.

"Intelligent merchandising of farm commodities through co-operative associations," to quote Mr. Steen, "leads finally to a stabilised agriculture, in which fluctuations in prices are minimised, risks of operations greatly reduced, and a premium placed upon the farmer's ability as a producer." . . . "Co-operative marketing rewards producers with improved prices and facilities in marketing, reduces materially the cost of marketing and distribution, and furnishes consumers with high-quality products often at lower prices ; all this is amply demonstrated by the experiences of leading American associations. Altogether it is the most hopeful existing movement for the permanence of American agriculture, and therefore for the nation." [1]

To the system of co-operative marketing there is, however, one objection which must be mentioned, since it is an objection of principle and goes right to the root of the whole question, namely, the danger of monopoly. The issue must be faced. Co-operative commodity marketing does lead to monopoly, there is no question about it. It is not until some degree of monopolistic control has been reached that any power of stabilising the market is obtained. The dangers of monopoly lie in the risk that these powers might be used to the disadvantage of the general community. Theoretically there may be such a risk in connection with a very highly organised co-operative marketing association whose activities cover a very large producing area, but in practice the danger of co-operative undertakings ever reaching the point of great trusts is remote. Moreover, the perishable nature of many agricultural

[1] "Co-operative Marketing."

crops, no less than the competition from foreign countries, is to some extent a safeguard. The risks attending an attempt to hold up supplies in order to force the market price far above its normal level would be very great, and might even bring to ruin the whole structure which co-operators have built up in their own interests. Even in non-perishables it would require an organisation far more widespread, and of a totally different character from anything that has been developed in the United States or elsewhere, before there would be any real public danger in the growth of co-operative movement.

It must not be supposed that America has been the only country in which agricultural co-operative marketing has shown remarkable progress since the war. Alike in Canada, Australia, New Zealand, Russia, the Argentine, to say nothing of Roumania, Italy, Czecho-Slovakia, and other European countries, co-operation in its different forms has been developed. The same cause has brought it to the forefront of agricultural policy ; the same remedy in a greater or less degree has been sought by farmers, as a measure of self-protection. Only in this country of incorrigible individualists is there an outstanding exception to this almost world-wide movement. To describe the movement in other parts of the world would, however, take us too far afield, notwithstanding the fact that it provides some examples of co-operative enterprise hardly less significant than those already referred to.

In England the case is different. The organisation of the industry in an American sense has made next to no progress at all, a fact which many are disposed to ascribe to the foibles of British character, rather than to

the farmer's inability to know what are his real needs. The farmer, no doubt, has his share of the English talent for happy-go-lucky improvisation, and no one can doubt that he has in full measure the individualistic temper and habit of mind which are sometimes regarded as a national asset. But, unhappily, in the particular matters here discussed, these qualities have availed him little. In his stubborn resistance to the idea of co-operation, he has put himself behind all the progressive farmers of the world. Ignorant of its economic advantages, and indifferent to its wonderful achievement in Denmark, Germany, the United States, and elsewhere, he has been content to stumble on, remaining a blind victim of the economic forces he neither seeks to understand nor attempts to control. With the greatest instrument of self-help staring him in the face for more than half a century, he has allowed the farmers of other countries far to outstrip him in economic organisation, and in a time of crisis has been usually more ready to seek safety in some kind of legislative protection, rather than in organising the industry to meet its real economic needs.[1]

In spite of its remarkable achievement, it would be a mistake to assume that co-operation on the American model—which has been applied in circumstances widely different from those of the United Kingdom—would necessarily be a success in this country. Few will doubt that in its practical details a modification would be necessary. But there is much less doubt that the same principles which are at the foundation of the

[1] It is right, however, to allow for the fact—which experience has undoubtedly established—that it is easier to organise co-operative marketing for an export market than for a home market.

American system would be applicable in this country. Excessive fluctuations in prices is a common evil experienced by farmers throughout the world. America's achievement is at least to show how co-operative marketing, carried out upon certain principles, can remedy this evil.

In the above discussion little has been said about the other well-known advantages of co-operation, the elimination of waste, the reduction of costs of distribution, standardisation, and grading of produce. This is not because they are any the less important, indeed, many of those who advocate co-operative distribution, do so solely on these grounds, but emphasis has here been laid on the aspect of the question in relation to prices because in this country it is a branch of agricultural economics which has been neglected almost to the point of being completely ignored. What can reasonably be claimed for co-operation is that in providing means of dealing at once with both sides of the question of distribution—the reduction of costs on the one hand, and the control of prices on the other—it is the most powerful economic weapon which falls directly within the control of producers.

Stabilisation of prices by means of Government controlled "pools" is an alternative method of collective trading, which, since the war, has been practised with the most conspicuous success in Australia. The exportable surplus of wheat during recent years has been marketed through the agency of wheat pools responsible for receiving, storage, financing, shipping, and marketing the grain. The scheme was initiated in respect of the 1915-16 crop, on account of the abnormal conditions

prevailing during the war, and the Commonwealth, and respective State Governments, undertook the whole business of controlling the machinery of the wheat pools. Agents of the State Governments, consisting usually of merchants, millers, or other authorised persons, having facilities for receiving, storing, and shipping wheat, were appointed to receive the grain on behalf of their respective Governments. The agent issued to the grower a storage certificate showing the quality and quantity of the grain delivered, and at the same time arrangements were made with the banks and other financial institutions for the payment to holders of certificates, of an advance on each bushel of wheat in store, the interest due to the banks in respect of these advances being included in the expenses of marketing, and being deducted from the final payment to the grower which was made on the completion of the sales. The selling on the London market was entrusted to a London Board, consisting of the High Commissioner, and Agents-General of the respective States.

In 1922, this compulsory Commonwealth Scheme came to an end, but the principle of pooling the exportable surplus was continued on a voluntary basis under the State Governments, acting independently of each other. Under this scheme, as in the case of the Commonwealth Scheme, each State ultimately received in respect of the grain actually shipped, the average net profit from the overseas realisations which, after paying expenses, was distributed *pro rata* amongst the growers.

The marketing organisation in respect of the exportable wheat surplus, was roughly as follows :—

There were three pools — (1) Victoria, (2) South Australia and New South Wales, in conjunction,

(3) Western Australia—growers being free to dispose of their wheat to the State Pool of their own Government, or to that of another State Government, or not, as they chose. In respect of each pool there was, as in the Commonwealth Scheme, a Wheat Board responsible for the purchase, collection, storage, financing, shipping, and marketing of the grain. An agent under each of these Boards was appointed to purchase wheat from the growers, making on behalf of the Board, an advance for the wheat received.

Wheat is not the only agricultural commodity which in Australia has been marketed in this manner. Collective sale on similar lines has been in operation in the case of dried fruit, and wool, and there has been a strong body of opinion in Australia in favour of retaining permanently the British Australian Wool Realisation Association, which operated so successfully after the war.

In Canada also, the same impulse towards collective trading has appeared. The establishment of the Canada Wheat Board was the result of the troubled conditions at the end of the European War. The wheat crops of 1917 and 1918 had been marketed at prices fixed by the Dominion Government. This could no longer be continued in 1919, on account of the dissolution of the arrangements with the Allies for the marketing of wheat. The Canada Wheat Board, started in 1919, established a national pool, eliminated speculation and achieved stabilisation at a stroke. The whole of the 1919 crop was marketed through its agency. The system was abandoned at the end of 1919 but the farmers who had been loud in their opposition to Government control when it was in operation, soon came to change their views after the slump in prices in 1920. Then they

were no less emphatic in their demands for the re-establishment of the Canada Wheat Board.

As a result of this agitation legislative authority was obtained in the spring of 1922 for the setting up, by the three western provinces, of a new Wheat Board. Manitoba appears at first to have been opposed to the proposal, but a recent report indicates that a definite decision to establish a wheat pool for handling Manitoba's 1924 crop has been reached, the pool to be known as the Manitoba Co-operative Wheat Producers Limited.

One point remains to which some further reference must be made, namely, the question of credit.

Enough has been said in the above discussion to show that, in the application of what may be called the "principles of stabilisation," credit performs a highly important function; indeed, no study of the wider question of agricultural credit can be complete without reference to this branch of the subject.

It is not the least achievement in the recent development of marketing in the United States to have established by practical experience the immense value of appropriate credit facilities in conjunction with the marketing of farm produce. The operations of the War Finance Corporation in this connection have already been referred to (see pages 180-181). The Corporation was, however, a temporary institution, and it remained therefore to consolidate these results and embody them in a permanent form.

Few branches of agricultural economics have received more detailed study in America than the subject of credit. It has naturally extended far beyond the question of merely assisting the distribution of farm produce,

since it includes the provision of credit for capital enterprise, for the extension of buildings, drainage operations, the purchase of stock, and other purposes incidental to the business of farming. This chapter is concerned only with the former part of the subject; it would, therefore, be too great a departure from the general lines of the discussion to give an account of the important legislative measures in which the American agricultural credit policy has been embodied. Two Acts may be mentioned, however, since they have gone very far towards solving the problem in the United States. The Federal Farm Loan Act was passed in 1916; its full title being, "An Act to provide Capital for Agricultural Development, to create standard forms of Investments based upon Farm Mortgage, to equalise rates of interest upon Farm Loans, to furnish a market for United States Bonds, to create Government Depositories and financial Agents for the United States, and other purposes." The general comprehensiveness of the measure may be judged from this title. Under the Act the country was divided into twelve districts. In each a Federal Loan Bank was situated through which long-term mortgage loans could be made to agriculturists.

The primary function of this Act was, however, to provide money for capital enterprise. Short-term credit facilities have been dealt with by a subsequent enactment, the Agricultural Credits Act, 1923, which placed on a permanent footing the special type of financial assistance which had been rendered by the War Finance Corporation. In each of the twelve districts referred to above, an intermediate Credit Bank, with a potential capital not exceeding 5,000,000 dollars, is established, the capital

being subscribed by the Federal Treasury as called for by the Bank Directorate. The loanable funds of the bank are increased by the issue of collateral trust debentures (which are tax-exempt) up to an amount not exceeding ten times the paid-in capital and surplus of the bank.

The purpose of these banks is to furnish discount facilities to banks and other financial institutions and to farmers' co-operative associations which have made loans for agricultural purposes, for terms of not less than six months or more than three years. Advances may also be made direct to co-operative associations of agricultural producers secured upon warehouse receipts.

Thus, an extensive system of marketing credits, which has had its origin partly in the experience of the last three years, has been permanently established and one of the primary needs of orderly marketing, met. But the Act of 1923 has given some further advantages in this matter. It has extended the definition of paper drawn for "agricultural purposes," which was previously defined in the Federal Reserve Act of 1914, so as to include the grading and processing of agricultural produce by co-operative marketing associations. Moreover, "the term of discount on paper drawn for an agricultural purpose, which in the original Act was made six months, as against a three months' limit on commercial paper, is by the new law increased to nine months, thus opening up the Federal Reserve System to an additional portion of the farmers' intermediate credit paper."[1]

In no branch of this subject would it be less safe to

[1] "International Review of Agricultural Economics," Vol. i. No. 4, p. 591.

argue from the experience of one country as to what would be applicable in another, where agriculture is carried on under widely different conditions. The particular form which the American legislation has taken, has been the consequence of profound study and voluminous discussion of the particular needs of American agriculture. In the United Kingdom the subject of agricultural credit has not been explored to the same extent. How to render "liquid" the immense potential assets of the industry, for the assistance of orderly production and distribution of agricultural produce still remains a problem which is largely unsolved. The feasibility of any proposals in this direction must ultimately be left to the technical judgment of those who are most concerned in applying them ; nevertheless, if the economic development of British agriculture is to be in any sense a counterpart of what has occurred in the United States, if it is to effect any substantial progress towards stabilisation, an extension of the existing credit system seems to be essential.

Marketing operations in this country are necessarily smaller in extent and different in character from those in America, but in a modern State they require to be financed in a modern way ; agriculture cannot afford to be left behind other industries in a matter so essential to its well-being. It would seem absurd if it were not true, that lack of the kind of credit facilities which are available to manufacturers, or the inability to use them, should be a permanent handicap to the farmer.

In some respects, the problem in America affords no guide at all to what might be done in this country. It is not enough to look for its solution only to the organisation or adaptation of credit machinery to meet

the needs of agriculture. There is obviously the alternative of organising agriculture to suit the existing credit machinery. It would be foolish to overlook the possibilities of the latter. The long distances and the remoteness of certain agricultural districts made an increase in the number of financial institutions in America a necessity. In this more compact and more highly-developed country, it is at least open to doubt whether there is a serious need for development in this direction at all. The provision of marketing credits in England, though none the less necessary to the orderly marketing of farm produce, is a problem of a different character. Approached from one point of view, it might even be said that the whole matter resolves itself into a question of the legal status of the produce of agriculture at the time immediately following the harvest. The banks exist, and on the whole in sufficient number ; the produce exists : how to render the latter acceptable collateral to the banks, at a cost which would make the operation worth while, would seem to be the crux of the problem we have to solve.

In America, the provision of marketing credits has been made easier by the fact that the physical distribution of farm products, on a scale so large, and over distances so great as those required by that country, needed for the purpose of economic handling, a system of intermediate storage in warehouses or elevators, which provide an easy means of obtaining bank advances. The chief obstacle to a similar development in this country is very largely one of cost. Would the cost of storage and financing be repaid by the better prices obtained in a stabilised market? Doubt on this point seems to have been one of the reasons for the extremely cautious

recommendations of the Linlithgow Committee[1] in regard to the erection of co-operative granaries in the United Kingdom.

In any circumstances, the benefit which may be derived from a stabilised market must remain a matter of calculation, and so long as the market itself is speculative, must to some extent also be a matter of speculation. Nevertheless, the facts as to the seasonal fall in prices would seem to justify the view that the cost of the former, even if it involved storage in warehouses, would in the case of many agricultural crops be outweighed by the benefit of the latter. Moreover, the question of storage itself requires investigation. Co-operative marketing associations in America, for example, frequently do not own warehouses but depend on other, sometimes subsidiary, organisations to provide these facilities, an arrangement which has actually made it easier to obtain bank advances.

It might be argued that in this country credit would be of more service if applied earlier in the industrial process, that some extended system of crop mortgages might meet the needs of the British farmer. The truth is that both marketing credits and production credits are essential elements in the problem of stabilisation. Crop and live stock mortgages are a common form of production credit in the United States although they have in the past involved a serious disadvantage, since the great majority of such loans are due immediately on the harvesting of the crops. This condition necessitates the

[1] "Interim Report on Cereals, Flour, and Bread," paragraphs 6-9. This committee were much more definite in their recommendations in regard to intermediate cold storage for hard fruit. See "Interim Report on Fruit and Vegetables," p. 87.

immediate sale of the crop and, therefore, gives a stimulus to the uneconomic dumping of the produce on the market, to avoid which is the primary object of "orderly marketing." In the United Kingdom, there is some reason to think that the system of bank overdrafts—the favourite form of agricultural credit in this country—has operated with much the same effect.

But it would be useless to dogmatise. In the absence of a more searching inquiry into the credit needs of British Agriculture, directed specifically to the question of orderly marketing as it has been in America, it is at least doubtful if any progressive movement in the matter is possible. Moreover, credit is so profoundly dependent upon other things besides merely the direct economic needs of the industry, upon the habits, the prejudices, the likes and dislikes—in short, upon the general psychology of those who use it, that the problem cannot hope for a simple solution. The fact, however, that great progress has been made in those countries where it has been approached from the point of view which is the subject of these pages, at least lends colour to the belief that a similar development in this country, which would give greater security to the farmer with greater command over the marketing of his produce, may in the end be brought about.

The questions discussed in this short survey are far from bringing us to the end of the economic problem connected with the distribution of agricultural produce. They have been concerned only with the reasons of *fluctuations* in price and their consequences. That there are other sides to the marketing problem equally if not more important, is well known, and of these a

very close analysis is contained in the recent reports of the Linlithgow Committee. Subject as it is to natural causes affecting the rate of production, but beyond the producer's control, agriculture must always present problems of organisation elaborate, one might almost say baffling, in their complexity. Baffling they would certainly seem were it not for the signal success with which certain countries are succeeding in overcoming them.

It must not be supposed that the recent developments in America are the result of some kind of happy accident which has put agriculturists on the right track. Nothing could be farther from the facts. They have come about through the widespread study of agricultural economics, in which matter, it must be admitted, America leads the world.[1] The establishment in the United States of the Bureau of Agricultural Economics in 1922, no less than the growing recognition for the need of research in this branch of the subject; the direct representation of agriculture on the Federal Reserve Board; the very close study of the question of credit, followed by the two recent Acts already mentioned, and the remarkable growth of collective trading, are the fruits which this wider knowledge has already borne.

In the United Kingdom there is no counterpart to this movement. The science of agricultural economics is still in its infancy, notwithstanding that it is a study which we can little afford to neglect, if British farming is to be prosperous, or to keep pace with the developments abroad. Until the economic environment of the

[1] The growth of the co-operative marketing movement in the United States, also owes much to the untiring zeal of Mr. Aaron Sapiro and others.

industry is more vividly apprehended by agriculturists, it is, perhaps, idle to expect a very rapid advance in these matters. Education must contribute its share to any progressive policy, as few will doubt who have observed the economic history of agriculture during the last decade. Amongst the students of agricultural colleges in America, it has even been said, some of the recent proposals for monetary stabilisation in that country are matters of common knowledge. How far are we from being able to make a similar claim!

To sum up. The economical distribution of agricultural produce involves two very distinct problems—one, the elimination of waste in the physical transference of crops from producer to consumer, a subject to which much attention has been devoted in recent years both in this country and abroad; the other, to organise the machinery of distribution in such a manner as to eliminate, or, at least, to modify the temporary congestion of markets with the consequent oscillations in the prices at which these commodities are sold.

When the causes of instability are analysed (disregarding for the moment the monetary aspect of the question), they are found to have their roots in a very simple fact. Food is produced in greatest abundance in summer and autumn, in good seasons rather than in bad, whilst people consume it at approximately the same rate all the year round. From this fundamental disharmony between supply and demand there is no escape; neither is there any escape from the inexorable law which connects the price of a commodity in a free market, with the quantity of it available for purchase. Hence the inherent instability of any agricultural system. Hence

arise half the economic problems which hedge around agricultural enterprise, and half the difficulties, perplexities, or disappointments, which harass the poor farmer in his efforts to make a living. Nature, unfortunately, does not manage her affairs on principles of economic harmony, and those who would propose an agricultural policy whilst still adhering to the belief in the free play of economic forces are thus confronted with a hopeless dilemma, for such a policy must, however it is framed, lead to a continuance of these price fluctuations for ever —so long as winter follows summer and summer winter. Stabilisation is not in itself an agricultural policy ; it is rather an object to which policy should be aimed. Nor must the mistake be made of over-valuing the benefit that may be derived from it. The organisation of agriculture to obtain greater stability by such means as the intermediate storage of produce, securing bank credits and similar operations, cannot be done for nothing, and these costs must be set off against any advantages that accrue from them. Nevertheless, in the proper co-ordination of supply and demand, whether through the instrumentality of Co-operative Marketing Associations or otherwise, lies one of the greatest hopes of the economic betterment of the whole agricultural industry. The practical problem is how to do these things cheaply enough, to secure the greatest benefit. This is where America has successfully pointed the way.

Agricultural policy as a whole has its own problems to solve which obviously go beyond the sphere of these purely economic questions ; on the other hand, as we have seen in the earlier part of this discussion, the stabilisation of prices also goes far beyond the sphere of a purely agricultural policy. The causes which may

influence the prices of farm produce, though severe in their incidence, may be remote in their origin ; such, in fact, is the outstanding experience of the last ten years. Thus is agricultural policy linked up with the economic and monetary policy of the nation, and ultimately with those of the other nations of the world. Upon these, the well-being of agriculture, no less than that of other industries, and more than most, depends.

What remains important in the specific sphere of the agricultural policy of the future, is that it should be framed, both inside the farm and without, with a full recognition of those economic laws and conditions from which, whether we wish it or not, there is no escape.

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APPENDIX.

TABLE I.

Percentage Increase in the Prices of Agricultural Produce during the Years 1914-22, *as compared with the Average of the Years* 1911-13.

Year.	Wheat.	Barley.	Oats.	Fat Cattle.	Fat Sheep.	Fat Pigs.	Hay.	Potatoes.	Milk.	Butter.	Cheese.	Poultry.	Eggs.	Fruit.	Wool.	Beans and Peas.	Vegetables.
1914	7	– 4[1]	5	6	13	6	– 23[1]	– 15[1]	3	1	4	– 5[1]	7	– 16[1]	9	8	8
1915	62	31	52	36	30	29	6	9	17	17	24	13	30	– 5[1]	59	41	24
1916	79	88	68	58	57	67	52	88	57	36	49	36	60	38	46	70	54
1917	132	128	151	105	97	126	57	137	91	77	103	69	111	54	62	170	138
1918	123	108	149	111	110	166	87	79	151	109	133	159	258	311	74	377	157
1919	123	167	164	132	130	176	157	135	200	115	169	127	255	218	208	219	157
1920	147	215	187	163	187	230	192	206	203	199	140	141	239	279	253	188	119
1921	119	84	72	127	117	128	51	132	163	115	71	112	142	183	– 16[1]	96	146
1922	46	41	47	63	100	87	40	79	79	61	43	92	93	88	14	80	96

[1] Decrease.

TABLE II.—*Percentage Increase in the Prices of Agricultural*
September, 1923, *as compared with the Average*

Month.	Wheat.	Barley.	Oats.	Fat Cattle.	Fat Sheep.	Fat Pigs.	Hay.
January, 1920 .	130	279	203	148	160	208	255
February . .	128	252	202	149	162	201	251
March . .	129	236	194	151	158	198	236
April . . .	122	221	181	153	166	259	232
May . . .	113	215	187	160	170	240	237
June . . .	119	245	206	164	162	212	211
July . . .	144	232	203	169	190	235	190
August . .	160	200	204	179	207	239	178
September . .	181	168	189	174	217	251	166
October . .	184	192	188	168	224	253	134
November . .	182	195	165	168	220	250	111
December . .	187	155	122	165	187	219	98
January, 1921 .	171	156	129	185	203	190	85
February . .	149	109	94	181	178	166	66
March . .	154	85	81	167	155	164	49
April . . .	169	75	83	160	147	162	44
May . . .	156	68	84	147	143	155	38
June . . .	162	61	86	130	124	136	33
July . .	144	61	77	111	90	119	43
August . .	99	94	67	122	93	129	66
September . .	82	109	62	109	79	114	59
October . .	61	82	38	86	66	85	44
November . .	41	61	35	75	53	70	45
December . .	45	56	45	61	44	62	41
January, 1922 .	44	51	49	62	60	71	35
February . .	50	49	48	67	72	82	32
March . .	66	46	53	66	100	85	32
April . . .	57	49	49	65	128	90	28
May . . .	62	49	53	70	140	91	33
June . . .	60	58	57	71	121	82	35
July . . .	53	49	55	70	107	91	37
August . .	53	48	59	70	103	92	54
September . .	23	26	31	58	90	84	52
October . .	24	29	33	49	90	85	45
November . .	32	34	38	48	87	94	45
December . .	32	17	36	48	81	94	47
January, 1923 .	33	20	43	61	103	102	43
February . .	28	12	39	61	97	88	42
March . .	27	8	36	54	94	77	42
April . . .	31	11	39	51	100	71	40
May . . .	37	16	42	53	103	72	41
June . . .	38	17	41	52	83	69	42
July . . .	39	12	41	45	72	54	38
August . .	29	9	30	46	76	52	34
September . .	19	30	30	45	72	55	32

Produce in each Month of 1920-22, *and from January to of the Corresponding Months of* 1911-13.

Potatoes.	Milk.	Butter.	Cheese.	Poultry.	Eggs.	Fruit.	Wool.	Beans and *Peas.*	Vege-tables.
229	297	98	206	118	284	23	253	204	126
258	237	200	201	114	207	—	251	200	111
265	215	196	199	107	234	—	247	171	126
235	260	221	—	98	232	—	247	185	93
252	137	177	144	142	237	193	243	179	163
—	137	174	142	165	254	233	210	187	142
—	157	183	137	153	281	250	199	210	151
—	170	202	122	146	284	296	199	218	159
219	190	213	118	147	262	452	201	192	116
201	167	243	108	148	234	402	191	178	92
207	200	240	105	140	190	331	172	181	100
196	230	235	98	155	205	251	134	156	101
170	235	198	96	125	192	190	133	129	119
147	230	186	100	101	177	—	116	110	114
123	202	151	98	109	123	—	59	87	115
101	223	126	92	110	133	—	34	95	68
124	90	100	86	122	94	—	20	100	80
92	93	85	63	135	199	166	- 19[1]	108	110
—	137	108	84	125	135	176	- 30[1]	104	171
198	190	123	97	105	150	201	- 31[1]	95	186
169	193	85	83	103	124	48	- 28[1]	95	175
144	112	75	40	85	137	60	- 24[1]	86	134
135	117	69	25	80	144	81	- 22[1]	79	174
129	113	65	29	70	133	82	- 23[1]	66	214
113	125	46	27	76	114	72	0	74	292
122	117	41	33	80	166	—	0	79	300
112	92	37	42	77	95	—	- 1[1]	81	323
95	42	49	46	83	89	—	- 1[1]	79	342
140	27	54	48	110	50	—	0	—	170
80	28	59	55	116	69	125	1	—	138
75	53	79	50	103	80	155	10	—	148
14	70	77	51	85	64	10	12	—	53
1	70	76	41	85	96	- 16[1]	13	—	20
3	90	71	36	77	104	- 15[1]	21	80	9
8	90	72	55	75	98	23	33	85	20
7	90	73	60	86	63	2	32	90	8
- 1[1]	90	73	85	81	86	—	43	102	14
- 5[1]	90	72	88	80	46	—	48	103	0
- 12[1]	87	70	95	81	55	—	47	117	- 4[1]
- 28[1]	70	68	92	75	37	—	47	—	6
- 28[1]	63	40	42	77	43	—	47	—	39
- 31[1]	53	33	44	87	40	97	41	—	83
66	57	37	54	79	36	120	43	—	86
80	67	48	67	61	68	105	47	—	70
75	67	56	74	67	75	152	49	—	88

[1] Decrease.

TABLE III.

Percentage Increase in Prices of Agricultural Produce, as compared with the Average of 1911-13.

Year.	Percentage Increase.
1914	1
1915	27
1916	60
1917	101
1918	132
1919	158
1920	192
1921	119
1922	69

TABLE IV.

Percentage Increase in the Prices of Agricultural Produce, each Month in 1919-22, *and from January-September,* 1923, *as compared with the Average of* 1911-13.

Year.	1919.	1920.	1921.	1922.	1923.
January	148	213	186	77	72
February	150	205	172	83	70
March	150	199	158	82	67
April	153	199	141	68	53
May	132	169	112	70	51
June	128	164	102	63	44
July	141	174	100	63	44
August	138	177	116	64	44
September	148	181	105	54	46
October	166	191	90	66	
November	182	197	84	70	
December	207	194	82	70	

TABLE V.

Percentage Increase in the Monthly Prices of Agricultural Produce in 1919-23, *as compared with the Average of the Corresponding Months of* 1911-13.

Year.	1919.	1920.	1921.	1922.	1923.
January .	145	200	183	75	68
February .	145	195	167	79	63
March . .	143	189	150	77	59
April . .	161	202	149	70	54
May . .	137	180	119	71	54
June . .	140	175	112	68	51
July . .	156	186	112	72	53
August . .	150	193	131	67	54
September .	160	202	116	57	56
October .	159	194	86	59	
November .	172	193	79	62	
December .	189	184	76	59	

TABLE VI.

Percentage Increase in the Cost of Sulphate of Ammonia, Superphosphate, Basic Slag, Feeding Stuffs, as compared with the Average of 1911-13.

Year.	Sulphate of Ammonia.	Superphosphate 30 Per Cent.	Basic Slag 30 Per Cent.	Feeding Stuffs.
1914	− 19[1]	2	0	0
1915	4	22	22	33
1916	26	68	63	90
1917	19	125	88	173
1918	15	136	99	179
1919	28	165	110	157
1920	65	222	183	162
1921	33	158	224	83
1922	9	57	95	49

[1] Decrease.

TABLE VII.—*Percentage Increase Monthly, in the Cost of Sulphate of Ammonia Superphosphate, Basic Slag, Feeding Stuffs, compared with the Average of* 1911-13.

Year.	Sulphate of Ammonia.	Superphosphate 30 Per Cent.	Basic Slag 30 Per Cent.	Feeding Stuffs.
January, 1920	55	200	114	176
February	58	202	114	171
March	60	208	114	185
April	60	227	114	173
May	60	228	114	165
June	71	232	219	158
July	71	232	222	153
August	71	229	225	154
September	70	228	230	169
October	70	229	230	168
November	70	231	230	149
December	70	222	230	128
January, 1921	72	213	230	124
February	75	213	230	107
March	77	213	230	94
April	77	213	230	97
May	77	213	230	83
June	47	207	222	74
July	- 9[1]	124	222	83
August	- 9[1]	124	225	92
September	- 7[1]	115	230	78
October	- 3[1]	90	230	56
November	- 1[1]	86	230	56
December	1	83	172	64
January, 1922	5	71	143	56
February	9	68	114	59
March	12	66	114	59
April	12	67	114	51
May	12	67	114	51
June	12	66	75	41
July	5	65	71	46
August	5	55	74	47
September	7	49	76	43
October	7	46	80	44
November	9	43	82	46
December	9	27	79	43
January, 1923	8	26	75	44
February	8	31	71	42
March	10	40	71	41
April	14	40	64	42
May	14	37	61	38
June	14	36	23	35
July	- 9[1]	34	23	35
August	- 9[1]	29	23	35
September	- 8[1]	26	20	38

TABLE VIII.

Percentage Increase in Agricultural Wages compared with 1914.

Year.	Percentage Increase.
1917	39
1918	54
1919	96
1920	140
1921	146
1922	74

TABLE IX.

Percentage Increase Monthly in Agricultural Wages compared with 1914.

Year.	1920.	1921.	1922.	1923.
January	110	160	86	54
February	110	160	83	54
March	110	160	80	55
April	139	160	79	56
May	139	160	78	56
June	139	160	78	56
July	139	160	78	56
August	160	160	76	56
September	160	135	75	56
October	160	122	60	56
November	160	110	55	
December	160	105	55	

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